Adult Aural Rehabilitation
a guide for CI professionals

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Authors:
Karen Pedley, Christopher Lind and Phillippa Hunt.

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Foreword

This guide is based on the *Adult Rehabilitation Manual* first printed in 1982, written by D. Mecklenberg, R. Dowell and V. Jenison. Clinicians around the world found this manual very useful, and Cochlear Ltd has received continual requests for updated material.

This new guide, *Adult Aural Rehabilitation*, was made possible through the collaborative efforts of Karen Pedley, Christopher Lind and Phillippa Hunt. Their cumulative experience has allowed us to create a valuable training and materials resource for clinicians working in adult aural rehabilitation.

Cochlear would like to thank all the clinicians involved in the production of this and previous versions of the guide for the contribution they have made to the cochlear implant (CI) field. We would also like to thank the CI recipients that participated in the accompanying DVD. In accordance with the CI recipients' wishes, they have not been identified to protect their privacy.

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Overview

Substantial variation exists in hearing performance among cochlear implant (CI) recipients. Many factors influence an individual's ability to make use of electrical stimulation. The successful outcome of implantation may depend on, for instance, age at implantation, age of onset and length of deafness, neural population reserve and speech perception ability. A recipient's progress may be affected by factors such as their ability to make use of electrical stimulation, their motivation, the extent to which the device is worn and the opportunities for conversational practice. The rate of improvement also varies between recipients, with some reaching their maximum potential within a few months while others continue to show improvement over several years.

Clinicians are, as yet, unable to predict the success or otherwise of a cochlear implant. So, flexibility and creativity must be used when attempting to provide the most successful rehabilitation.

This guide, the accompanying DVD and the CD are valuable resources for clinicians working on rehabilitation programs for adults with severe to profound hearing impairment, and contain training exercises to meet the different skill levels of CI recipients. The package can be used for clinical training, or as a materials resource when working with recipients.

How the material is organised

The manual

The manual contains a detailed explanation of many clinical techniques and the rationale behind each of them. Complete exercises are provided to support the techniques. The exercises have been divided into three chapters: Analytic Training, Synthetic Training and Communication Therapy.

Analytic exercises focus the recipient's attention on specific speech features. ***Synthetic exercises*** present words in the context of phrases or sentences so the recipient can take advantage of syntactic, semantic and context cues. Some exercises could arguably provide training at both analytic and synthetic levels. ***Communication therapy exercises*** develop the ability of the CI recipient to experience more success in, and better control of, day-to-day conversation. These exercises more closely mimic conversational style than the listen-and-respond style of analytic and synthetic exercise.

The order of the chapters does not imply that the recipient should reach a level of competency in, for example, analytic skills before attempting synthetic tasks. It is desirable to first establish the recipient's goals and then practice exercises from all chapters at each rehabilitation session, to develop skills in all areas concurrently.[1]

Appendix 1 contains a case study of a rehabilitation program showing the progress of a CI recipient, that uses techniques from all three chapters. ***Appendix 2*** contains some tables and graphic material in a format that can be easily photocopied. ***Appendix 3*** contains a full list of references.

[1] Pedley and Giles, 2005

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At the end of each section of each chapter, the following are listed:

- exercises pertaining to that section
- DVD scenes that demonstrate some exercises, showing a clinician working with a CI recipient.

The DVD

The DVD contains scenes demonstrating some of the exercises in the guide in a real-life setting. The scenes show clinicians working with CI recipients in rehabilitation sessions. Clinicians will find this material helpful in guiding them in their communication with their recipients.

The DVD has not been developed as a standalone resource, but rather to enhance and illustrate the material in the guide. The booklet in the DVD/CD case gives a brief description of each scene with key observations.

The CD

The CD contains full copies of all the exercises in the manual. These can be adapted for clinicians' and recipients' individual needs, and printed out easily from Microsoft Word files. Note that these exercises are for use **within the clinic** only.

Exercises gathered from published sources are referenced in the footnotes at the bottom of the appropriate pages. The full reference can be found in Appendix 3 of this manual. **When adapting or printing the exercises, please ensure either the footnote (for exercises from published sources) or footer (for exercises developed by Cochlear Ltd) is included, to comply with copyright legislation.**

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Hierarchy of Performance

The exercises in the guide assume that speech perception tasks can be differentiated by the types of response described below.[2] This means that people move from basic perceptual skills of detection and discrimination to the more difficult task of comprehension, then to everyday conversation. Many of the exercises will work at a number of perceptual levels. For example, if a recognition task is too difficult, it can be changed to an identification task to better suit the recipient's speech perception abilities. In some cases, modifications may be needed to suit the recipient's literacy level, linguistic skills, culture or cognitive ability.

Discrimination tasks

Discrimination tasks require the recipient to report whether two items are the same or different. Assuming that the recipient can detect sound, this is the simplest level of speech perception performance, and may be the most appropriate initial training level for some recipients. However, recipients who have been deaf for a prolonged period of time or have no recollection of sound may need time and practice to learn to differentiate aspects of the new signal. Therefore, before presenting the training items, the clinician should give such recipients an opportunity to become a little more familiar with the new sound. Considerable encouragement should be provided to these recipients throughout the training program, and activities should be carefully selected to foster a positive attitude.

Identification tasks

Identification tasks require the recipient to select the correct response from a closed-set (that is, forced- or multiple-choice list). The activities presented for identification assume that the recipient is able to detect and discriminate between two items that differ in some aspect (for example, in duration, rhythmical pattern, pitch content, pitch pattern). If the recipient is having difficulty with identification, the activity can be changed to a discrimination task by comparing the correct response with the recipient's response and asking if the two items are the same or different. Identification activities can be elevated to a more difficult performance level by increasing the number of choices presented to the recipient, by not providing familiarisation or by making the task open-set (that is, not providing pre-set choices). Such open-set tasks are referred to as recognition tasks (see below).

Recognition tasks

Recognition tasks require the recipient to repeat what is said without the aid of a predetermined set of alternative responses. Recipients should be able to identify items from a reasonably large set of choices before beginning recognition tasks, as the transition from closed-set identification to open-set recognition can be difficult. For the purposes of this training program, three types of recognition tasks are presented:

- **Recognition tasks with direct (or key word) clues**, in which the recipient is given part of the material (for example, a word, or phrase) before it is presented.

[2] Based on Erber, 1982

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The clue is always given in a listening and lip reading condition, that is, audiovisually.

- **Recognition tasks with indirect clues**, in which the recipient is given a word or phrase that is related to the topic of the material, but is not part of the content. The clinician can introduce indirect clues by discussing the topic, or by providing a topic phrase, word or picture.
- **Recognition tasks without clues**, in which the recipient must recognise a word, phrase or sentence that is unrelated to any previous contextual information.

Comprehension tasks

Comprehension tasks require recipients to use listening and cognitive skills, and give an interactive rather than imitative response. Comprehension tasks more accurately imitate important aspects of everyday spoken interaction. The higher cognitive load associated with perception and comprehension makes these the most demanding of the synthetic tasks.

Conversation management

Conversation management brings elements of conversational behaviour under the conscious control of the CI recipient. The recipient can better understand the conversation, by increasing their awareness of:

- the characteristics of the conversation partner (for example, familiarity, speaker characteristics)
- the physical and acoustic environment (for example, noise, reverberation, lighting)
- the message (for example, grammatical predictability).

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Using the Exercises with Recipients

Using a range of materials

The guide provides auditory training exercises at different levels of complexity to ensure that the needs of recipients can be met. Using these as a starting point, the clinician can develop specific tasks with vocabulary to reflect each recipient's particular needs and goals. The material is best suited to the rehabilitation needs of adults, but most of the exercises may be adapted for younger recipients.

Evaluating cochlear implant recipients' progress

Almost all materials presented in this guide may be adapted to evaluate the progress of recipients through rehabilitation. However, clinicians should be aware that in most cases these materials do not provide normative assessments, so each assessment should evaluate whether the **individual** recipient is making progress during rehabilitation. This progress is best measured against the individual's performance prior to, or at an earlier point in, intervention.

The most successful rehabilitation will also vary, as recipients' expectations and goals can differ greatly. These therapy goals should always be discussed and recorded at the beginning of a rehabilitation program to ensure the recipient's needs are met and to reflect on their progress or achievements through rehabilitation.

Presentation skills

When administering these exercises:

- **Explain the purpose of the exercise**. Recipients are more likely to be attentive and motivated if there is a clear goal that is relevant to them. The explanation should include the skill being practiced and an example of how this skill is used in daily living.
- **Cue the recipient to the feature you wish to direct their attention to** through rehearsal and repetition, and by exaggerating the feature slightly if necessary.
- **Encourage guessing**. The recipient should strongly be encouraged to guess. Guessing always counts.
- **Confirm all correct responses** so the recipient can use the additional information for subsequent trials.
- **Maintain the recipient's motivation** by judiciously selecting tasks at appropriate levels for their abilities. The task level should ensure sufficient success to motivate their continued effort. Tasks should neither be too easy nor too hard.
- **Give positive feedback**. If the recipient performs poorly or receives negative feedback on every item, they can quickly become discouraged. Phrases such as 'let's listen to those two words again' or prompts such as 'almost' are preferable to negative feedback.
- **Modify exercises if necessary**. If the recipient cannot do the task after three attempts, make the exercise easier, using the advice in the guide. Examples of techniques to reduce task difficulty might include speech reading, written clues, visual cues, clue words, shortening the phrase or using a slower presentation rate.

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- **If lip reading is required to assist successful task completion, always end the trial with a presentation to the recipient in the auditory-only condition**, without requiring them to respond.

Keep in mind that some recipients may never achieve open-set recognition. Special consideration should be given when first attempting open-set recognition tasks, so recipients do not become frustrated or develop an attitude that implies that the implant is not providing enough benefit.

Characteristics of an effective clinician

A flexible and adaptive approach by the clinician will ensure that the training material is challenging while still enabling the recipient to be successful.

The effective clinician will:

- listen carefully when talking with the recipient about their experiences with the implant, noting not only what is said but also how it is expressed
- involve the family or significant other in the feedback and in exercises whenever appropriate
- consider the recipient's lifestyle and individual needs, always working towards the recipient's goals
- use every opportunity to assess (both formally and informally) how well the recipient has incorporated new techniques into their communication
- integrate rehabilitation and technological intervention and recognise the interplay between the psychophysics of the recipients' MAP and their success or otherwise in the various rehabilitation exercises.

Building on the exercises

The training activities presented in this guide serve only as examples of techniques in practice in CI rehabilitation clinics. Clinicians are encouraged to be creative by building on these materials to develop new and interesting techniques to facilitate adult CI recipients' communicative success.

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What is Analytic Training?

About the author
Phillippa Hunt is an Audiologist at the National Audiology Centre, Auckland.
Address: National Audiology Centre, New Zealand Cochlear Implant Program, Auckland, New Zealand.
Email: PHunt@adhb.govt.nz

The analytic auditory training method is based on the assumption that speech is understood by recognising the smallest distinguishing linguistic features that can be extrapolated and applied to higher-level units of speech.

A form of bottom-up processing, analytic training consists of a hierarchical series of exercises or drills. In these, speech is analysed into the smallest components that serve to distinguish one speech unit from another. These are then contrasted with one another with the aim of teaching the listener to perceive the small but important differences between them.

The analytic elements of speech consist of **suprasegmentals** and **segmentals**. Suprasegmentals comprise features of speech such as intonation, pitch, stress and timing. Segmentals comprise the phonemic elements of consonants and vowels, for example, the discrimination between 'nip' and 'pip'.

The contrasted units are represented by phonemes or embedded in words. They are, however, semantically meaningless units, such as 'na' or 'apa'. The combination of these minimal units of speech results in words or phrases that carry semantic meaning.

It is a widely held view that analytic training alone is of limited value. Some people feel that removing linguistic redundancy, that is, speaking a word in isolation rather than as a component of a sentence, does not represent everyday communication. Others believe that auditory training will be effective only if it closely resembles normal communication. Analytic training is always administered as part of a wider program incorporating analytic and synthetic training, and communication therapy (see the case study in Appendix 1).

There is, however, a place for analytic training with cochlear implants. Introducing an implant to a severe-to-profoundly deaf person introduces frequencies that they may never have heard. Along with perceiving these new sounds, they must now associate meaning with them. Therefore, training in the minimal features of speech, or analytic training, can be a useful stepping-stone to wider communication training.

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1 Syllable Counting

Syllable counting is a way of measuring the recipient's ability to discriminate between words based on the number of syllables. A syllable is a unit of pronunciation uttered without interruption, forming the whole or part of a word, and usually having one vowel or diphthong sound preceded, followed or surrounded by one or more consonants. For example, there are two syllables in 'water' and three in 'inferno'.

Syllable counting uses a recipient's ability to identify words using the suprasegmental features of stress, timing and rhythmn.

Word length identification

Word length identification tasks are lists of words, which contrast in syllable number and, therefore, in length.

As the simplest, lowest-level task in the guide, this process requires the recipient to discriminate the characteristics of speech represented by syllables. Each word in a set contains a different number of syllables. To discriminate between the words, the recipient must count the number of syllables in each one.

Exercises

1.0 Syllable counting – word length identification (monosyllable versus bisyllable versus polysyllable)
1.1 Syllable counting – word length identification by syllable difference
1.2 Syllable counting – word length identification – 5-choice
1.3 Syllable counting – word length identification – 3-choice

Listening to syllable number in sentence carrier

In *exercises 1.4 to 1.6*, the test item is prefaced with a carrier or lead-in phrase that remains consistent. The purpose of this format is to provide a constant known stimulus that allows the recipient to 'tune in' and practice the syllable counting task before the onset of the test item.

Exercises

1.4 Syllable counting – carrier phrase (monosyllabic versus polysyllabic)
1.5 Syllable counting – carrier phrase (monosyllabic and polysyllabic)
1.6 Syllable counting – carrier phrase (monosyllabic and bisyllabic)

Sentence length identification

Although this task is sometimes classified as synthetic, in this guide it is classified as analytic, as the intention of *exercises 1.7 to 1.9* is for the listener to use the number of syllables in a word to identify the test item. It is natural, however, for the listener to employ a blend of cues to make the identification. These include:

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- segmental cues, such as phoneme recognition
- synthetic cues, such as word recognition
- meta-communication cues, such as syntax.

This task also illustrates the complexity of assigning any exercise to only one of the three categories.

Exercises

1.7 Syllable counting – sentence length identification (monosyllables)
1.8 Syllable counting – sentence length identification (monosyllables and bisyllables)
1.9 Syllable counting – sentence length identification (monosyllables, bisyllables and polysyllables)

Phrase length identification

Exercises 1.10 to 1.12 are similar to exercises in the previous section but they extend the test item following the carrier, or lead-in phrase, from one word to a phrase containing one or more words.

Although this is inherently a suprasegmental exercise, segmental information – such as recognition of some phonemes or even words – may also be employed by the recipient to discriminate or identify the test item.

Exercises

1.10 Syllable counting – phrase length identification – with carrier phrase
1.11 Syllable counting – phrase length identification – with carrier phrase (monosyllable, bisyllable and polysyllable)
1.12 Syllable counting – phrase length identification – with carrier phrase

DVD

Scene 1: Syllable counting

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2 Word Stress

The location of stress in a sentence carries significant information and it can alter the meaning of an utterance. Stress is identified by amplitude and durational cues, both of which are easily perceived by a cochlear implant recipient. The identification of this feature can be practiced to prepare for communication therapy.

Exercise

2.0 Word stress

DVD

Scene 2: Word stress

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3 Vowel and Consonant Phonemes

A recipient can be trained to distinguish vowel and consonant phonemes that are difficult for them. This guide contains some sample exercises for phoneme training, and the DVD includes a demonstration of how to use this material. A wider range of suitable training resources is included in Appendix 3.

Vowel and consonant confusion studies

These materials are based on Australian English and are a measure of performance, not a training exercise. One study concentrates on vowel recognition and one on consonant recognition. The number of vowels and consonants are sufficient to present a reasonable task that is difficult enough to challenge the recipient, yet not too long to become tedious and overly time consuming.

Examples of the two studies are presented under 'Vowel recognition' and 'Consonant recognition' below.

Clinicians should take care to ensure that the vowel stimuli presented are relevant to their own regions and dialects of English.

Vowel recognition[3]

Vowels are commonly distinguished by the low and mid frequency bursts of energy they contain. These are known as formants. Most vowels are readily distinguished by the first and second formants alone (F_1, F_2)[4].

This test requires the recipient to identify a vowel from a set of singleton vowels (non-diphthongs). There are eleven singleton vowels in Australian English. The vowels are presented in an /h/-vowel-/d/ context, for example, 'heed', 'hid', 'had', in the auditory-only condition.

The clinician presents phonemes from the vowel grid randomly and asks the recipient to repeat them. Any resulting errors or confusion may indicate which phonemes require specific auditory training.

The table on the following page can be used to record and monitor which vowels are correctly identified and which are confused with one another, for example, 'heed' may be confused with 'head'.

This table can be more easily photocopied from Appendix 2.

[3] Plant, 1984, Commtram, NAL, Australia.
[4] Kent & Read, 1992

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Table 1. Vowel recognition

Stimulus \ Response	Heed	Hid	Head	Had	Hard	Hud	Hod	Hawed	Hood	Who'd	Heard
Heed											
Hid											
Head											
Had											
Hard											
Hud											
Hod											
Hawed											
Hood											
Who'd											
Heard											

The clinician can use *exercises 3.0 to 3.7*[5] to create training for specific vowels. The clinician should create training lists that start with a small subset which includes the confused vowels and those the recipient is comfortable with, to prevent them becoming frustrated. Additional variables can be added as the recipient improves.

When specific vowel identification problems are identified, the vowel can be drilled by using a 'same/different' discrimination task. Place the vowels into a consonantal frame and present them to the recipient. For example, /a/ and /e/ can be placed into the consonantal frame /p-t/ to make 'pat' and 'pet'. The recipient should identify if these words are the same or different. If the recipient has difficulty in identifying that

[5] *Exercises 3.0–3.1* and *3.4–3.7* are from Plant, 1984, Commtram, NAL, Australia

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the words are different, place each one in a sentence and read both sentences to the recipient. When they recognise the difference, repeat the two words randomly so the recipient can practice identifying the vowels.

Exercises

3.0 Phonemes – short versus long vowels, contrasting formant frequencies
3.1 Phonemes – short versus long vowels – vowel length
3.2 Phonemes – vowel length identification (set A)
3.3 Phonemes – vowel length identification (set B)
3.4 Phonemes – vowel length in sentences
3.5 Phonemes – low versus high frequency vowels in words
3.6 Phonemes – low versus high frequency vowels in words in carrier sentences
3.7 Phonemes – F_2 (second formant) discrimination

DVD

Scene 3: Phonemes – vowel discrimination

Consonant recognition[6]

This test is similar to the vowel recognition test except that a set of 12 consonants (b, p, m, f, v, d, t, n, s, z, g, k) is used in an /a/-consonant-/a/ context, for example, 'aba', 'apa', in the auditory-only condition.

The clinician presents phonemes randomly from the grids and asks the recipient to repeat them. Any resulting errors, or confusions, may indicate which phonemes require specific auditory training.

The table on the next page can be used to record and monitor which consonants are correctly identified and which are confused with one another, for example, 's' may be confused with 't'.

This table can be more easily photocopied from Appendix 2.

[6] Plant, 1984, Commtram, NAL, Australia.

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Table 2. Consonant recognition

Stimulus \ Response	b	p	m	v	f	d	t	n	z	s	g	k
b												
p												
m												
v												
f												
d												
t												
n												
z												
s												
g												
k												

The clinician can use *exercises 3.8 to 3.19*[7] to create training for specific consonants. The clinician should create training lists that start with a small subset which includes the confused consonants and those the recipient is comfortable with, to prevent them becoming frustrated. Additional variables can be added as the recipient improves.

[7] *Exercises 3.8* and *3.10–3.19* are from Plant, 1984, Commtram, NAL, Australia.

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Exercises

3.8 Phonemes – consonant pattern identification
3.9 Phonemes – common consonant confusions
3.10 Phonemes – voiced versus voiceless consonants
3.11 Phonemes – voicing versus voiceless words in carrier phrase
3.12 Phonemes – voicing in initial position
3.13 Phonemes – voiced versus voiceless words in a carrier phrase
3.14 Phonemes – manner of articulation, voiceless stops versus nasals in initial and final position
3.15 Phonemes – manner of articulation, voiced stops versus nasals in initial and final position
3.16 Phonemes – manner of articulation, fricatives versus nasals in initial and final position
3.17 Phonemes – manner of articulation, laterals versus nasals in initial and final position
3.18 Phonemes – manner of articulation, affricate versus fricative in initial position
3.19 Phonemes – manner of articulation, voiceless stop versus voiceless fricative in initial position

DVD

Scene 4: Phonemes – consonant discrimination – words
Scene 5: Phonemes – consonant discrimination – sentences

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4 High–Low Frequency Identification

One of the principal features of a multi-channel cochlear implant is its ability to convey high frequency information. Some recipients (for example, congenitally deaf people) may never have heard high frequency phonemes and may perceive them through the cochlear implant as separate, meaningless syllables. The ability to discriminate high-frequency sounds may therefore require training.

Exercise 4.0 presents stimulus sentences that are weighted for high- or low-frequency phonemes.

Once a specific consonant, or consonant cluster, has been learned, its position in a word can help the recipient to identify the word from a closed-set. The placement of the consonant is the identifying feature.

Exercise

4.0 High–low frequency discrimination

Phoneme pattern discrimination in sentences

Exercise 4.1 varies the position of the high- and low-frequency phonemes in a sentence. Each sentence pair clusters its high- or low-frequency components at opposite ends of the sentence. Recognition of individual phonemes will help to identify the sentence.

Exercise

4.1 Frequency discrimination – phoneme pattern in sentences

Sentence identification

Sets of sentences that are not highly contrasting can be used to extend the difficulty of the sentence length identification and phoneme pattern discrimination tasks. For example, all sentences can be the same length, not be biased for place-pitch cues and contain both monosyllabic and polysyllabic words.

Exercise 4.2 falls into both analytic and synthetic categories, depending on whether the listener identifies the sound using the analytic cue of phoneme recognition or the synthetic cue of meaning.

Exercise

4.2 Frequency discrimination – sentence identification (closed-set same length sentences)

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5 Overlearned Speech Task

Frequently heard or overlearned speech[8] refers to phrases used so regularly that the listener might be able to predict the whole sentence after hearing only a portion of it, for example, 'How are you?'. Other examples include 'Things are looking up' or 'I just couldn't believe my eyes'. The phrases are frequently used in a given context, and the words they contain often go together, follow a predictable order and vary little from speaker to speaker.

These characteristics allow the recipient to use their knowledge of language to guess any missed or misperceived words. Clichés and colloquialisms as well as slang phrases can be included.

In this closed-set task, the recipient is presented with a written list of overlearned speech phrases. Initially, the clinician may show the recipient a limited number of phrases. The clinician reads the phrases to the recipient. The clinician then repeats one of the phrases and the recipient is asked to identify it from the list. The recipient is encouraged to use key words to identify the correct phrase. When the recipient is successful with a subset of the phrases, more phrases can be added to the set.

This exercise has both analytic and synthetic characteristics. It allows the clinician to discuss with the recipient the value of redundancy cues in overlearned speech in poor listening conditions.

See page 98 for information on overlearned speech in a synthetic context.

Exercise

5.0 Overlearned speech

DVD

Scene 7: Overlearned speech

[8] Jeffers and Barley, 1971. Courtesy of Charles C Thomas, Publisher, Ltd, Springfield, Illinois.

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6 Text Following

In this exercise, the recipient is given a copy of the paragraph to be read. They are instructed that the clinician will read the paragraph and they should follow it by pointing to each word as it is spoken. As the paragraph is read, the clinician watches as the recipient follows the text. The clinician stops randomly and the recipient repeats the last word the clinician said. If the recipient falls behind, the last word is repeated until they catch up. Slowing the rate of reading, stopping at the end of a phrase or sentence or using simpler material makes the task easier. More complex materials, stopping randomly throughout the text and quicker reading rates make the task harder.

The same paragraph or story may be read several times during the same session. Each reading familiarises the recipient with the sound of known words, and indirectly encourages associations of electrical sound patterns with meaningful word stimuli.

The clinician should use a passage of text that is unfamiliar to the recipient. This may be a passage from a novel, newspaper or magazine.

Exercise

6.0 Text following – Two jokes, joke 1
6.1 Text following – Two jokes, joke 2
6.2 Text following – Australia
6.3 Text following – Charles Lindberg
6.4 Text following – A town called Reed
6.5 Text following – The Saint Bernard

DVD

Scene 8: Text following

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Exercises

In the following exercises, the words 'Clinician' and 'Recipient' appear in the top right-hand corner of the exercise, to indicate their intended use:

- **Clinician**: contains the full list of potential presentation items
- **Recipient**: guide for the recipient to follow the exercise.

Where there are separate 'Clinician' and 'Recipient' pages, the 'Clinician' page should not be shared with the recipient.

For material obtained from published sources, an acknowledgement appears in the lower left-hand corner, and the full source appears in Appendix 3.

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Exercise 1.0 Syllable counting – word length identification (monosyllable versus bisyllable versus polysyllable)

Clinician
Recipient

Instructions
I will say two words, while pointing to each, then repeat one of them. Please tell me, or point to, the word I repeated.

1	man	magnificent
2	turkey	telephone
3	mark	medical
4	voice	investigation
5	form	formula
6	conclusion	occasionally
7	general	January
8	rat	repeat
9	meat	measure
10	time	turkey
11	summertime	disappointment
12	variation	investigation
13	night	neighbour
14	virtue	vacation
15	disappointment	magnificently

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Exercise 1.1 Syllable counting – word length identification by syllable difference

Clinician
Recipient

Instructions
I will say two words, while pointing to each, then repeat one of them. Please tell me, or point to, the word I repeated.

List A (4-syllable difference)

1	man	mysteriously
2	night	independently
3	pie	opportunity
4	time	intelligently
5	zone	organisation

List B (3-syllable difference)

1	day	medicinal
2	egg	altogether
3	crazy	organisation
4	turkey	intelligently
5	rat	romantically

List C (2-syllable difference)

1	gem	general
2	reindeer	medicinal
3	vacation	investigation
4	egg	government
5	magazine	mysteriously

List D (1-syllable difference)

1	pie	painful
2	turkey	telephone
3	somebody	medicinal
4	shade	sandwich
5	repeat	radio

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Exercise 1.2 Syllable counting – word length identification – 5-choice

Clinician
Recipient

Instructions
I will say five words, pointing to each word as I say it. Then I will repeat one word. Please tell me, or point to, the word I repeated.

1	man	mother	magazine	magnificent	mysteriously
2	night	neighbour	newspaper	notwithstanding	independently
3	pie	police	painfully	experiment	opportunity
4	time	turkey	telephone	transportation	intelligently
5	day	reindeer	somebody	medicinal	Indian summer
6	egg	garden	government	altogether	argumentation
7	farm	famous	favourite	information	unfortunately
8	voice	virtue	vacation	variation	investigation
9	sand	sandwich	summertime	disappointment	magnificently
10	zone	crazy	position	reasonable	organisation
11	shade	shiver	permission	transportation	professionally
12	beige	measure	conclusion	unusual	occasionally
13	gem	justice	general	January	vegetable juice
14	rat	repeat	radio	romantically	recommendation
15	need	mustard	internal	inventory	intermediate

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Exercise 1.3 Syllable counting – word length identification – 3-choice

Clinician
Recipient

Instructions
I will say three words, pointing to each word as I say it. Then I will repeat one word. Please tell me, or point to, the word I repeated.

1	cheerful	eventual	time
2	game	happy	chocolate
3	Christmas	hall	beautiful
4	charm	company	plastic
5	telephone	ping	sandman
6	sure	assurance	shipwreck
7	encyclopaedia	yellow	love
8	water	awareness	wait
9	rainbow	blow	rehabilitation
10	rob	barber	basketball
11	chipmunk	chain	championship
12	office	ice	sensitive
13	no	notice	nomination
14	play	hippopotamus	apple
15	yesterday	toy	after
16	operation	bacon	can
17	wonder	top	understand
18	you	liberate	latter
19	men	hammer	eliminate
20	he	probably	pretty

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Exercise 1.4 Syllable counting – carrier phrase (monosyllabic versus polysyllabic)

Clinician
Recipient

Instructions
I will say two sentences, then repeat one of them. Please tell me which sentence I repeated.

To increase the difficulty, I will say one sentence only from each pair. Please tell me which sentence I said.

1 A He owns a car.
B He owns an automobile.

2 A He thought it was fun.
B He thought it was serious.

3 A How tall is your mum?
B How tall is your grandmother?

4 A I walked on the floor.
B I walked on the carpet.

5 A There is not enough time.
B There is not enough peanut butter.

6 A I want to go now.
B I want to go to work.

7 A Have you ever seen an owl?
B Have you ever seen an elephant?

8 A Don't give up hope.
B Don't give up the ship.

9 A Tell her to come home.
B Tell her to come to the movies.

10 A I saw it in the bookshop.
B I saw it in the supermarket.

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Exercise 1.5 Syllable counting – carrier phrase (monosyllabic and polysyllabic)

Clinician
Recipient

Instructions
I will say two sentences, then repeat one of them. Please tell me which sentence I repeated.

1 A I need a new coat.
B I need a new umbrella.

2 A At the zoo, I saw an ape.
B At the zoo, I saw an elephant.

3 A I studied maths.
B I studied geography.

4 A We stopped at the petrol station and bought gum.
B We stopped at the petrol station and bought gasoline.

5 A Show me your eye.
B Show me your apartment.

6 A Bring me some cake.
B Bring me some lemonade.

7 A I read the book.
B I read the encyclopaedia.

8 A I love to play ball.
B I love to play Monopoly.

9 A Did you forget to buy the milk?
B Did you forget to buy the spaghetti?

10 A Where is the man?
B Where is the manager?

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Exercise 1.6 Syllable counting – carrier phrase (monosyllabic and bisyllabic)

Clinician
Recipient

Instructions
I will say two sentences then repeat one of them. Please tell me which sentence I repeated.

1 A I watched them play cards.
B I watched them play football.

2 A Did you eat the egg?
B Did you eat the sandwich?

3 A Don't run.
B Don't forget.

4 A I have a friend.
B I have a neighbour.

5 A My socks are green.
B My socks are yellow.

6 A I don't think he is sick.
B I don't think he is welcome.

7 A I think he's fine.
B I think he's crazy.

8 A The month is May.
B The month is August.

9 A He felt old.
B He felt happy.

10 A Put it in the hall.
B Put it in the bedroom.

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Exercise 1.7 Syllable counting – sentence length identification (monosyllables)

Clinician
Recipient

Instructions
I will say one of the following sentences. Please tell me which one, or point to the one I said.

1 A Why do you have to go?
B What is it?
C Can you help me?
D You will find the keys on the bench.

2 A Keep out of my way.
B I don't know.
C You can take the train to the new park.
D I will run down to the store.

3 A Go back.
B That's not the way to go.
C Don't leave me here.
D She did not see him on the road.

4 A Tell me.
B He wants to go back to the house.
C They took it home.
D Where did you go last week?

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Exercise 1.8 Syllable counting – sentence length identification (monosyllables and bisyllables)

Clinician
Recipient

Instructions
I will say one of the following sentences. Please tell me which one, or point to the one I said.

1 A I couldn't believe it was you.
B Goodbye now.
C It's my birthday on Monday.
D Tell me again.

2 A Take it easy.
B Can you figure it out?
C The Earth revolves around the sun.
D Oh, no.

3 A It's Greek to me.
B He waited for the bus.
C Try to relax.
D What did you get for Christmas?

4 A Cartoons are funny pictures.
B The pilot flew the plane.
C Let's take a break.
D Where is Jeff?

5 A I like to swim in the pool.
B We had a snowstorm.
C I'll be right there.
D Please don't go.

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Exercise 1.9 Syllable counting – sentence length identification (monosyllables, bisyllables and polysyllables)

Clinician
Recipient

Instructions
I will say one of the following sentences. Please tell me which one, or point to the one I said.

1 A Don't ever give up.
B I forgot to close the refrigerator.
C My friend plays the piano.
D There must be time.

2 A The party was fun.
B I feel like a new person.
C Summer days are usually hot.
D Give me some tea.

3 A I can't understand you.
B The floor is difficult to clean.
C Does it seem possible?
D I had an incredible vacation.

4 A Why is she underneath the table?
B It's my birthday on Monday.
C Good evening.
D Leave it all to me.

5 A The carpet is difficult to keep clean.
B See you later.
C It does not seem to be possible.
D Lunch is at one o'clock.

6 A I feel fine.
B Can you figure it out?
C They built a snowman.
D Would you like a glass of cold lemonade?

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Exercise 1.10 Syllable counting – phrase length identification – with carrier phrase

Clinician
Recipient

Instructions
I will say these sentences with one of the three ending phrases. Listen to the sentence as I say it. Tell me or point to the word or phrase I used at the end of the sentence.

1	The game is	here tomorrow in the afternoon
2	Did you see the .....?	baby Christmas tree new teacher at school
3	The woman	stayed home went for a walk moved to another country
4	The glass was	empty completely broken filled with fresh strawberries
5	My friend is	tall very happy away on a long trip
6	We baked	bread muffins chocolate chip biscuits
7	Where is the .....?	door kitchen new computer
8	How many .....?	pies little trucks one dollar bills

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Exercise 1.11 Syllable counting – phrase length identification – with carrier phrase (monosyllable, bisyllable and polysyllable)

Clinician
Recipient

Instructions
I will say each sentence using one of the three ending phrases. Listen to the sentence as I say it. Please tell me or point to the word or phrase used at the end of the sentence.

1	I went to the	store movies mall in town
2	We eat	eggs ice-cream bread and jam
3	I like to	read sky dive watch TV
4	What time is .....?	it break time the movie
5	Why can't you .....?	smile sit down stay outside
6	The dishes are	clean dirty in the sink
7	The boy went	home to work for a walk

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Exercise 1.12 Syllable counting – phrase length identification – with carrier phrase

Clinician
Recipient

Instructions
I will say each sentence using one of the three ending phrases. Listen to the sentence as I say it. Please tell me or point to the word or phrase used at the end of the sentence.

1 The name of the country is ……..	Greece Italy Papua New Guinea
2 I enjoy ……..	resting at home taking a long drive in the country sunshine and playing tennis
3 There is always plenty of time ……..	to watch my favourite TV show for going shopping to catch up on my reading
4 In the winter, ……..	the skiing resorts are open days are very cold many children throw snowballs and build snowmen
5 During summer, ……..	many people go on holiday tennis is a popular game days are very long and nights are very short

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Exercise 2.0 Word stress

Clinician

Instructions
Repeat each sentence to the recipient, putting more stress on the word with number '1' placed under it. Ask the recipient which word you have stressed. Sentences can be repeated, putting more stress on the word with number '2' under it, and then on the word with number '3' under it.

1 How did you know the answer?
1 2 3

2 You must listen to me.
1 2 3

3 I want to go to the movies.
1 2 3

4 I am so tired at night.
1 2 3

5 Springtime is my favourite season.
1 2 3

6 Please go with me.
1 2 3

7 Have you ever had iced coffee?
1 2 3

8 Bring it to me now.
1 2 3

9 That fellow is strange.
1 2 3

10 Why are you so excited?
1 2 3

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Exercise 2.0 Word stress

Recipient

Instructions
I will say a sentence, placing more stress on one word. Please tell me which word I have stressed.

1 How did you know the answer?

2 You must listen to me.

3 I want to go to the movies.

4 I am so tired at night.

5 Springtime is my favourite season.

6 Please go with me.

7 Have you ever had iced coffee?

8 Bring it to me now.

9 That fellow is strange.

10 Why are you so excited?

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Exercise 3.0 Phonemes – short versus long vowels, contrasting formant frequencies[9]

Clinician
Recipient

Instructions
I will say two words, then repeat one of them. Please tell me which one I repeated.

1	theme	thumb
2	sharp	ship
3	teach	touch
4	barn	bin
5	leak	luck
6	card	kid
7	neat	nut
8	harm	him
9	sheet	shut
10	parch	pitch
11	seen	sun
12	lark	lick
13	heel	hull
14	heart	hit
15	bean	bun
16	part	pit
17	keep	cup
18	park	pick
19	beat	but

[9] Plant, 1984, Commtram, NAL, Australia.

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20	hard	hid
21	port	putt
22	guard	good
23	doors	does
24	lark	look
25	worn	one
26	part	put
27	talk	tuck
28	card	could
29	bored	bud
30	bark	book
31	court	cut
32	pass	puss
33	stalk	stuck
34	hard	hood
35	torch	touch
36	shark	shook
37	torn	ton
38	starred	stood
39	dawn	done
40	hark	hook

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Exercise 3.1 Phonemes – short versus long vowels – vowel length[10]

Clinician
Recipient

Instructions
I will say two words, then repeat one of them. Please tell me which one I repeated.

1	carp	cup
2	port	put
3	peep	pip
4	mast	must
5	wall	wool
6	sleek	slick
7	lark	luck
8	hawk	hook
9	leap	lip
10	cart	cup
11	sort	soot
12	peat	pit
13	heart	hut
14	cord	could
15	meat	mitt
16	bark	buck
17	fort	foot
18	heed	hid
19	dark	duck
20	hoard	hood

[10] Plant, 1984, Commtram, NAL, Australia.

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Exercise 3.2 Phonemes – vowel length identification (set A)

Clinician
Recipient

Instructions
I will say each of these sentences using only one of the underlined words. Please tell me which one, or point to the word I used in the sentence.

1 They were talking about the fawn/fun they had.

2 Mary and Sue looked at the sheep/ship.

3 There were many coats/cots in the room.

4 John began to paint/pant.

5 Do you have the bait/bat in your car?

6 He bought some cheap/chip board at the hardware store.

7 He was sorry that he beat/bit the boy.

8 Pass me the meat/mit.

9 They talked about the fate/fat of the land.

10 Roger caught/cut the fish.

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Exercise 3.3 Phonemes – vowel length identification (set B)

Clinician
Recipient

Instructions
I will say each of these sentences using only one of the underlined words.
Please tell me or point to the word I used in the sentence.

1 The suit/soot is dirty.

2 My dress was caught/cut by the machine.

3 He found the meat/mit in the cabinet.

4 Did he feel/fill the cup?

5 You should not peek/pick at your Christmas presents.

6 The heat/hit can cause pain.

7 It was a steel/still aeroplane.

8 It's hard to say if he took/talked to her.

9 Is there a way to pool/pull everything?

10 Why did he sleep/slip in the bathtub?

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Exercise 3.4 Phonemes – vowel length in sentences[11]

Clinician
Recipient

Instructions
I will read out two sentences, then repeat one of them. Please tell me which one I repeated.

1 A We were looking at the picture of the sheep.
B We were looking at the picture of the ship.

2 A You can see the ball over the fence.
B You can see the bull over the fence.

3 A The little boy was afraid of the duck.
B The little boy was afraid of the dark.

4 A This ward should be cleaned.
B This wood should be cleaned.

5 A I thought you were going to sleep.
B I thought you were going to slip.

6 A The farmer was worried about the cart.
B The farmer was worried about the cut.

7 A The bun was burned in the fire.
B The barn was burned in the fire.

8 A It was all a ridiculous farce.
B It was all a ridiculous fuss.

9 A I like the colour of that wall.
B I like the colour of that wool.

[11] Plant, 1984, Commtram, NAL, Australia.

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10 A We stored the parcel in the next room.
B We stood the parcel in the next room.

11 A You shouldn't worry about your heart all the time.
B You shouldn't worry about your hut all the time.

12 A The fisherman held up the cup.
B The fisherman held up the carp.

13 A The mountaineer was staring at the peak.
B The mountaineer was staring at the pick.

14 A They spent all morning cleaning the cart.
B They spent all morning cleaning the kit.

15 A Can you hear the bees?
B Can you hear the buzz?

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Exercise 3.5 Phonemes – low versus high frequency vowels in words[12]

Clinician
Recipient

Instructions
I will read out two words, then repeat one of them. Please tell me which one I repeated.

1	bath	booth
2	spark	speak
3	tar	too
4	parch	peach
5	tart	toot
6	fast	feast
7	hard	who'd
8	barn	bean
9	bars	booze
10	park	peak
11	car	key
12	yard	you'd
13	grass	grease
14	carp	coop
15	lark	leak
16	half	hoof
17	far	fee
18	harm	whom
19	tar	tea

[12] Plant, 1984, Commtram, NAL, Australia.

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20 spark	spook
21 pup	pip
22 putt	put
23 but	bit
24 tuck	took
25 nut	knit
26 cud	could
27 luck	lick
28 luck	look
29 bug	big
30 stud	stood
31 swum	swim
32 buck	book
33 bun	bin
34 chuck	chook
35 rung	ring
36 bucks	books
37 sunk	sink
38 ton	tin
39 hut	hit
40 flung	fling

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Exercise 3.6 Phonemes – low versus high frequency vowels in words in carrier sentences[13]

Clinician
Recipient

Instructions
I will read out two sentences, then repeat one of them. Please tell me which one I repeated.

1 A I think he wants to know about the bath.
B I think he wants to know about the booth.

2 A The harp was lying on the floor.
B The hoop was lying on the floor.

3 A I don't know what to do about that old cart.
B I don't know what to do about that old coat.

4 A He's always thinking about bars.
B He's always thinking about booze.

5 A I hope you haven't lost the car again.
B I hope you haven't lost the key again.

6 A We walked all the way to the mountain park.
B We walked all the way to the mountain peak.

7 A We'll have to do something about the grass.
B We'll have to do something about the grease.

8 A The farmer was very proud of his barns.
B The farmer was very proud of his beans.

9 A It tastes a little like tar.
B It tastes a little like tea.

10 A We could hear the hymn very clearly.
B We could hear the hum very clearly.

[13] Plant, 1984, Commtram, NAL, Australia.

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Exercise 3.7 Phonemes – F_2 (second formant) discrimination[14]

Clinician
Recipient

Instructions
I will say two words, then repeat one of them. Please tell me which one I repeated.

1	tea	too
2	pit	put
3	cap	cup
4	pit	pet
5	beat	boot
6	kid	could
7	bat	but
8	bid	bed
9	feed	food
10	pill	pull
11	bad	bud
12	pick	peck
13	geese	goose
14	kicks	cooks
15	back	buck
16	pig	peg
17	peach	pooch
18	brick	brook
19	tag	tug
20	miss	mess

[14] Plant, 1984, Commtram, NAL, Australia.

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Exercise 3.8 Phonemes – consonant pattern identification

Clinician
Recipient

Instructions
I will say two words, pointing to each word as I say it, then randomly repeat one word. Please identify the repeated word. I will repeat the words twice more in the same way, before moving on to the next two.

1	saw	whisk
2	mass	Sam
3	shun	nuts
4	same	mass
5	cheap	match
6	show	nose
7	charm	march
8	zoo	bruise
9	chair	much
10	reach	chair
11	same	mash
12	chap	patch
13	rice	sign
14	shine	mesh
15	jacket	t-shirt
16	shore	wash
17	chum	much
18	boss	some
19	chill	leach
20	maze	sane

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Exercise 3.9 Phonemes – common consonant confusions[15]

Clinician
Recipient

Instructions
I will say two words, pointing to each word as I say it, then randomly repeat one word. Please identify the repeated word. I will repeat the words twice more in the same way, before moving on to the next two.

F and Sh

1	fail	shale
2	fought	short
3	few	shoe
4	frill	shrill
5	fell	shell

F and P

1	fat	pat
2	fill	pill
3	fry	pry
4	fee	pea
5	fleas	please

F and P (in end position)

1	cuff	cup
2	half	harp
3	wharf	warp
4	tiff	tip
5	whiff	whip

F and Z

1	feel	zeal
2	fed	zed
3	grief	grease
4	beef	bees
5	wife	wise

[15] Courtesy Queensland Cochlear Implant Centre

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B and V

1	bat	vat
2	ban	van
3	bent	vent
4	bolt	vault
4	bail	veil
5	berry	very

M and N

1	mail	nail
2	mine	nine
3	sum	sun
4	gum	gun

D and G

1	bug	bud
2	grain	drain
3	grip	drip
4	thug	thud
5	mug	mud
6	gate	date

Z and S

1	zip	sip
2	zeal	seal
3	zoo	sue
4	buzz	bus

D and T

1	dart	tart
2	den	ten
3	seed	seat
4	feed	feet
5	dream	team
6	dim	tim

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Exercise 3.10 Phonemes – voiced versus voiceless consonants[16]

Clinician
Recipient

Instructions
I am going to read out two words, then repeat one of them. Please tell me which word I repeated.

1	rip	rib
2	cap	cab
3	mop	mob
4	lap	lab
5	rope	robe
6	pup	pub
7	pick	pig
8	duck	dug
9	lack	lag
10	lock	log
11	frock	frog
12	back	bag
13	beat	bead
14	bit	bid
15	fat	fad
16	cod	cot
17	card	cart
18	hard	heart

[16] Plant, 1984, Commtram, NAL, Australia.

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19	hiss	his
20	course	cause
21	Bruce	bruise
22	bus	buzz
23	curse	curs
24	pace	pays
25	ice	eyes
26	rice	rise
27	thief	thieve
28	leaf	leave
29	calf	carve
30	surf	serve
31	safe	save
32	life	live
33	half	halve

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Exercise 3.11 Phonemes – voicing versus voiceless words in carrier phrase[17]

Clinician
Recipient

Instructions
I will say two sentences, pointing to each sentence as I say it, then repeat one sentence. Please tell me which sentence I repeated.

1 A Look at the fleas on that sheep.
B Look at the fleece on that sheep.

2 A He should have taken a cap.
B He should have taken a cab.

3 A I don't know what we'll do about that mop.
B I don't know what we'll do about that mob.

4 A I'm worried about our horse's feet.
B I'm worried about our horse's feed.

5 A The rope is over there on the floor.
B The robe is over there on the floor.

6 A He's always thinking about that pup.
B He's always thinking about that pub.

7 A The farmer bought a new pick.
B The farmer bought a new pig.

8 A He put the parcels on his back.
B He put the parcels on his bag.

9 A Have you seen the new dock?
B Have you seen the new dog?

[17] Plant, 1984, Commtram, NAL, Australia.

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10 A The girl was looking at the beautiful frog.
B The girl was looking at the beautiful frock.

11 A He was looking at the card.
B He was looking at the cart.

12 A The boy hit the little dog.
B The boy hid the little dog.

13 A Is that a new coat?
B Is that a new code?

14 A Pick up that lock and follow me.
B Pick up that log and follow me.

15 A We need some new seeds for the garden.
B We need some new seats for the garden.

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Exercise 3.12 Phonemes – voicing in initial position[18]

Clinician
Recipient

Instructions
I am going to say two words, pointing to each word as I say it, then repeat one word. Please tell me, or point to, the word I repeated.

1	pig	big
2	park	bark
3	pet	bet
4	putt	but
5	pie	by
6	pat	bat
7	toe	dough
8	tale	dale
9	tart	dart
10	tie	die
11	too	do
12	tug	dug
13	coat	goat
14	came	game
15	cot	got
16	card	guard
17	come	gum
18	cap	gap
19	sue	zoo

[18] Plant, 1984, Commtram, NAL, Australia.

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20 sewn	zone
21 sip	zip
22 sack	zack
23 sing	zing
24 seal	zeal
25 few	view
26 fault	vault
27 fat	vat
28 fast	vast
29 fuse	views
30 fowl	vowel
31 chore	jaw
32 choke	joke
33 cheap	jeep
34 chug	jug
35 chock	jock
36 cheered	jeered
37 chives	jives
38 char	jar
39 chain	Jane

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Exercise 3.13 Phonemes – voiced versus voiceless words in a carrier phrase[19]

Clinician
Recipient

Instructions
I am going to read out two sentences, then repeat one of them. Please tell me which sentence I repeated.

1 A The little girl had a toy pear.
B The little girl had a toy bear.

2 A He dropped the food into the bubbling fat.
B He dropped the food into the bubbling vat.

3 A The crowd cheered the actors.
B The crowd jeered the actors.

4 A Is that your new coat?
B Is that your new goat?

5 A We need a new pin for this.
B We need a new bin for this.

6 A He was worried about the pill.
B He was worried about the bill.

7 A He has never had a pet.
B He has never had a bet.

8 A The baker was worried about his dough.
B The baker was worried about his toe.

9 A He threw a dart at him.
B He threw a tart at him.

[19] Plant, 1984, Commtram, NAL, Australia.

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10 A I thought he was joking.
B I thought he was choking.

11 A Do you think we should tie this fabric?
B Do you think we should dye this fabric?

12 A It was only a little pit.
B It was only a little bit.

13 A We are going to have to get a new path.
B We are going to have to get a new bath.

14 A He bought a painting of a beach.
B He bought a painting of a peach.

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Exercise 3.14 Phonemes – manner of articulation, voiceless stops versus nasals in initial and final position[20]

Clinician
Recipient

Instructions
I will say two words, pointing to each word as I say it, then repeat one. Please tell me, or point to, the word I repeated.

1	pea	me
2	pop	mop
3	pie	my
4	peel	meal
5	pet	met
6	paw	more
7	park	mark
8	pay	may
9	pat	mat
10	pen	men
11	fan	fat
12	bone	boat
13	cone	coat
14	sun	shut
15	bin	bit
16	pen	pet
17	seen	seat
18	ban	bat
19	bean	beet
20	mean	meet

[20] Plant, 1984, Commtram, NAL, Australia.

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Exercise 3.15 Phonemes – manner of articulation, voiced stops versus nasals in initial and final position[21]

Clinician
Recipient

Instructions
I will say two words, pointing to each word as I say it, then repeat one. Please tell me, or point to, the word I repeated.

1	match	batch
2	man	ban
3	morn	born
4	mail	bail
5	me	be
6	need	deed
7	neck	deck
8	nice	dice
9	nose	doze
10	name	dame
11	come	cub
12	hum	hub
13	rim	rib
14	rum	rub
15	dam	dab
16	hen	head
17	moon	mood
18	bun	bud
19	pan	pad
20	corn	cord

[21] Plant, 1984, Commtram, NAL, Australia.

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Exercise 3.16 Phonemes – manner of articulation, fricatives versus nasals in initial and final position[22]

Clinician
Recipient

Instructions
I will say two words, pointing to each word as I say it, then repeat one. Please tell me, or point to, the word I repeated.

1	sum	numb
2	sea	knee
3	sap	nap
4	sit	knit
5	seed	need
6	said	Ned
7	sick	nick
8	sack	knack
9	sag	nag
10	sash	gnash
11	cease	seen
12	kiss	keen
13	nice	nine
14	grace	grain
15	fuss	fun
16	moose	moon
17	horse	horn
18	mass	man
19	case	cane
20	dice	dine

[22] Plant, 1984, Commtram, NAL, Australia.

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Exercise 3.17 Phonemes – manner of articulation, laterals versus nasals in initial and final position[23]

Clinician
Recipient

Instructions
I will say two words, pointing to each word as I say it, then repeat one. Please tell me, or point to, the word I repeated.

1	lip	nip
2	law	nor
3	lap	nap
4	lit	knit
5	let	net
6	lot	not
7	lick	nick
8	lash	gnash
9	led	Ned
10	lead	need
11	gain	gale
12	pain	pale
13	tin	till
14	keen	keel
15	pin	pill
16	mean	meal
17	fine	file
18	coin	coil
19	spin	spill
20	skin	skill

[23] Plant, 1984, Commtram, NAL, Australia.

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Exercise 3.18 Phonemes – manner of articulation, affricate versus fricative in initial position[24]

Clinician
Recipient

Instructions
I will say two words, pointing to each word as I say it, then repeat one. Please tell me, or point to, the word I repeated.

1	chew	shoe
2	chin	shin
3	chip	ship
4	chewed	shooed
5	chore	shore
6	cheered	sheared
7	chock	shock
8	cheap	sheep
9	chook	shook
10	cheer	shear
11	chose	shows
12	chop	shop
13	cheers	shears
14	chair	share
15	chores	shores
16	cheat	sheet
17	choose	shoes
18	chairs	shares
19	chucks	shucks
20	chins	shins

[24] Plant, 1984, Commtram, NAL, Australia.

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Exercise 3.19 Phonemes – manner of articulation, voiceless stop versus voiceless fricative in initial position[25]

Clinician
Recipient

Instructions
I will say two words, pointing to each word as I say it, then repeat one. Please tell me, or point to, the word I repeated.

1	toe	so
2	tick	sick
3	toot	suit
4	tack	sack
5	tip	sip
6	touch	such
7	tie	sigh
8	ton	son
9	tight	sight
10	till	sill
11	tent	sent
12	tame	same
13	tilt	silt
14	tea	see
15	tin	sin
16	team	seem
17	tend	send
18	tail	sail
19	take	sake
20	tap	sap

[25] Plant, 1984, Commtram, NAL, Australia.

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Exercise 4.0 High–low frequency discrimination

Clinician
Recipient

Instructions
I will say these sentences. Listen to the sentences as I say them. Do not look at my face, look at the sentences instead.

Now, I will say only one of the sentences in this set. Tell me which one, or point to the sentence I said.

1 A Paul brought all the wood home.
B She drinks really sweet tea.

2 A It's easy to see.
B My brother liked blue.

3 A She is his sister.
B The door blew open.

4 A Mike has milk each day.
B He sits in his seat.

5 A Bob brought the ball.
B Sis uses the scissors.

6 A Knock on the door.
B She eats the cheese.

7 A Catch the keys!
B Mow the lawn!

8 A His feet itch.
B Move over.

9 A It's easy.
B Oh, no.

10 A She's sick!
B No more!

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Exercise 4.1 Frequency discrimination – phoneme pattern in sentences

Clinician
Recipient

Instructions
I will say two sentences, then repeat one of them. Please tell me which one I repeated.

1 A Sheep don't live in a barn.
B Bob had sixteen sheep.

2 A Sit here on the floor.
B You should get six of these.

3 A Move over till he sees it.
B Each street gets a new pavement.

4 A The neighbour is eager to see Sydney.
B Six seats are available for us.

5 A Paul bruised his leg.
B His sheets are soft.

6 A This chick wants a worm.
B The boat docks with ease.

7 A Sweep the floor with a broom.
B Don't walk in the street.

8 A Sit still and don't move.
B Turn over the chicken, please.

9 A Joan wants tea and cheese.
B See me tomorrow afternoon.

10 A We often see ice in the winter.
B It's easy to grow tomatoes.

11 A His seat is too low.
B Robert runs with ease.

12 A The tide came in at six.
B This string should make a bow.

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Exercise 4.2 Frequency discrimination – sentence identification (closed-set same length sentences)

Clinician

Instructions
Instruct the recipient that they will hear one sentence from the group, for example, from Set A. Ask the recipient to point to or tell you the sentence that was read. Repeat the sentence if the recipient asks you to, or seems unsure how to answer. Encourage the recipient to guess.

Set A

1 John Smith broke his left arm.

1 Turn left at the next street.

3 The king was a great man.

4 What time does your watch say?

Set B

1 Keep watching the road.

2 I can't stay awake.

3 Tell him to come here.

4 Stop causing trouble.

5 Turn on the heater.

Set C

1 Why don't you buy some new clothes?

2 Did you see that old movie?

6 The rain fell all through the day.

4 It's your turn to wash the car.

5 I can't understand that man.

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Set D

1 Why don't you fix the bathroom window?

2 Don't go out into the cold night air.

3 They went out for dinner and a show.

4 The car won't start because it's so cold.

5 People are quite often tolerant.

6 Would you prefer the walls to be blue?

7 The bus was held up for ten minutes.

8 That magician is very clever.

9 Can you understand why she's crying?

10 It's difficult to find parking there.

Set E

1 The train was one hour late.

2 Can I have some tea please?

3 The cow stood by the gate.

4 The dead tree blocked the road.

5 Chess is quite a hard game.

6 Put the cup on the shelf.

7 Did she break the glass jar?

8 What time does the film start?

9 The shirt had a large stain.

10 Feed the cats twice a day.

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Exercise 4.2 Frequency discrimination – sentence identification (closed-set same length sentences)

Recipient

Instructions
I will say one of the following sentences. Please tell me or point to the sentence I say.

Set A

1 John Smith broke his left arm.

2 Turn left at the next street.

3 The king was a great man.

4 What time does your watch say?

Set B

1 Keep watching the road.

2 I can't stay awake.

3 Tell him to come here.

4 Stop causing trouble.

5 Turn on the heater.

Set C

1 Why don't you buy some new clothes?

2 Did you see that old movie?

3 The rain fell all through the day.

4 It's your turn to wash the car.

5 I can't understand that man.

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Set D

1 Why don't you fix the bathroom window?

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3 They went out for dinner and a show.

4 The car won't start because it's so cold.

5 People are quite often tolerant.

6 Would you prefer the walls to be blue?

7 The bus was held up for ten minutes.

8 That magician is very clever.

9 Can you understand why she's crying?

10 It's difficult to find parking there.

Set E

1 The train was one hour late.

2 Can I have some tea please?

3 The cow stood by the gate.

4 The dead tree blocked the road.

5 Chess is quite a hard game.

6 Put the cup on the shelf.

7 Did she break the glass jar?

8 What time does the film start?

9 The shirt had a large stain.

10 Feed the cats twice a day.

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Exercise 5.0 Overlearned speech[26]

Clinician
Recipient

Instructions
I will say these phrases to you. Repeat them as I say them.

1 It's for you
2 Who was that?
3 With that in mind…
4 Up and down.
5 I'm going to…

6 Come in.
7 As a matter of fact…
8 On second thoughts…
9 By that time…
10 Not at all

11 What of it?
12 Not at this time.
13 Are we gong?
14 But will they all…
15 I had it with me.

16 There were some.
17 Has he seen it?
18 Which is it?
19 Do you know?
20 Is that my pen?

21 If that were true…
22 He said to me…
23 What would you do?
24 Do you hear them?
25 I asked her.

26 He wore it.
27 Where is your car?
28 Do you have any more?
29 Now it's time to go.
30 Things are looking up.

[26] Jeffers and Barley, 1971. Courtesy of Charles C Thomas, Publisher, Ltd, Springfield, Illinois

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31 Do you think so?
32 We went out.
33 How can that be?
34 Later than you think.
35 I only hope so

36 What did she say?
37 He made it.
38 Is there any more?
39 Let's not get into that.
40 Those men…

41 It must be.
42 A lot of people
43 May I say this?
44 It's a man's voice.
45 What about…

46 Look it over.
47 There are some more.
48 I like these two.
49 Very well, thank you.
50 Please do.

51 As I said before…
52 I feel great
53 How could you?
54 Such a thing!
55 He was first.

56 Only once.
57 Only one time.
58 Every little thing.
59 Can you come?
60 Tell us about it.

61 Shall we go?
62 What should I do?
63 Then I said…
64 The paper's here.

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Exercise 6.0 Text following – Two jokes, joke 1[27]

Clinician
Recipient

Instructions
I will read the following passage. Follow the passage by pointing to each word as I speak it. When I stop, repeat the last word I said.

Two jokes, joke 1

Two old men who lived in a village deep in the country decided one day to take a trip to London. This meant they had to leave their village, get on a bus to the nearest town, and there catch the train for London. It was all a big adventure for them, as they had never done anything like it before.

To eat on the journey, they had bought some bananas. They'd never eaten bananas before either.

They got on the train and were marvelling at the speed. One man decided to try his banana, but just as he was taking a bite the train entered a tunnel.

'Have you eaten your banana yet?' he called out to his friend.

'No', replied his friend.

'Well, don't', said the first man. 'I took one bite of mine and went blind.'

[27] Watcyn-Jones, 1995. Reproduced by permission of Penguin Books Ltd.

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Exercise 6.1 Text following – Two jokes, joke 2[28]

Clinician
Recipient

Instructions
I will read the following passage. Follow the passage by pointing to each word as I speak it. When I stop, repeat the last word I said.

Two jokes, joke 2

A motorist driving through the country stopped for a hitch-hiker who was holding the halter of a cow.

'I can give you a lift', he said, 'But I can't take your cow'.

'Don't worry', said the hitch-hiker. 'She'll follow us in her own time.'

So the hitch-hiker got in and the motorist started up. He drove at thirty miles an hour, and the cow trotted along behind him. He drove at forty miles an hour, and the cow was still trotting along behind him. He drove at fifty miles an hour, yet the cow was somehow managing to keep pace with him. But he noticed in his mirror that the cow seemed to be tiring, as her tongue was hanging out of her mouth.

'I'm worried about your cow', said the motorist to his passenger, 'Her tongue is hanging out of her mouth to the right'.

'Oh, that's all right', said the hitch-hiker, 'That means she's going to overtake'!

[28] Watcyn-Jones, 1995. Reproduced by permission of Penguin Books Ltd.

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Exercise 6.2 Text following – Australia

Clinician
Recipient

Instructions
I will read the following passage. Follow the passage by pointing to each word as I speak it. When I stop, repeat the last word I said.

Australia

The continent of Australia is about 7,000 miles southwest of California. It is both a continent and an island and is almost exactly the same size as the mainland United States. The Nullarbor is the second largest desert in the world and means 'no trees' in Latin. Because of this huge desert, most of the population live around the coastal borders. There are seven states, including the island of Tasmania.

One of the most interesting features of this country is the animals. The most well-known is the koala bear, of course. In fact, the koala is not really a bear, because it has a pouch in which it carries its young. The koala lives in a special kind of eucalytptus tree, because the koala will eat only the leaves from this tree.

Another animal is the wallaby. This is a miniature kangaroo. It has very big eyes and very long claws and is more friendly than a kangaroo. There are several kinds of kangaroos: grey ones, red ones, and brown ones. They have very large hind feet and a long tapered tail that make it possible for them to leap great distances. They can move faster than fifty miles per hour. In the north of Australia, kangaroos can be found in the wild very easily. However, wild Australian animals are not usually found wandering the streets of any major city.

There are many other interesting things in this land called 'Down Under'.

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Exercise 6.3 Text following – Charles Lindberg

Clinician
Recipient

Instructions
I will read the following passage. Follow the passage by pointing to each word as I speak it. When I stop, repeat the last word I said.

Charles Lindberg

Charles Lindberg was the first pilot to fly solo across the Atlantic ocean. He flew from the North American continent to Europe in a plane called 'The Spirit of St. Louis'. His goal was to win an award called the Orteig Prize which was worth $25,000. His biggest problem was fighting the desire to sleep. But he had a lot to keep him busy. His plane had only a few instruments. He flew through bad weather, was very short on fuel and had to land at night in Paris.

Lindberg was the first of many record holders who flew transcontinental as a solo pilot. He made his flight between New York and Paris in 1927. This first non-stop flight to Europe took 33 hours and 30 minutes. Today it can be flown in less than 3 hours, but usually takes 6–8 hours.

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Exercise 6.4 Text following – A town called Reed

Clinician
Recipient

Instructions
I will read the following passage. Follow the passage by pointing to each word as I speak it. When I stop, repeat the last word I said.

A town called Reed

Reed was the name of the town where Ed was born. He had lived there all his life. Reed sat in a valley. Ed would walk to the top of the ridge to look at the town. One day he saw that the town church did not look the same as it had the day before or the week before or even the year before. This time it had a face.

The steps in the front were like a mouth, and the two towers were like ears. Windows in each tower were the eyes. He often had seen the church from the ridge, but this time it was new, he thought. It made him laugh. The best thing about his new point of view was not that the church had a face, but that the mouth (that is, the stairs) was in the shape of a smile.

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Exercise 6.5 Text following – The Saint Bernard

Clinician
Recipient

Instructions
I will read the following passage. Follow the passage by pointing to each word as I speak it. When I stop, repeat the last word I said.

The Saint Bernard

A large, strong dog was specially raised in the Swiss Alps in Europe. It grew to have a thick brown and white coat. The dog was called a Saint Bernard. It was first trained by monks. They lived in a mountain shelter called The Lodge of Saint Bernard. The shelter was for hikers and skiers.

The dogs were trained to help patrol the snow-covered trails. They were trained to search for people lost in the mountains. They would drag or lead them back to the shelter. There they could be taken care of by the monks.

The monks soon learned that walking or lying cold in the snow caused people to become very thirsty. So they tied small kegs of water or alcohol around the necks of the Saint Bernard. In the case of the person being able to walk, a sip could be taken to restore energy. If the lost person was not awake, the Saint Bernard would drag them to the lodge. If the person woke up during the journey, he or she could take a sip from the keg while being taken to the lodge.

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What is Synthetic Training?

About the author
Karen Pedley is Principal Audiologist at Queensland Cochlear Implant Centre.
Address: Queensland Hearing, Brisbane Private Hospital, Queensland, Australia.
Email: karen@qldhearing.com.au

In the previous chapter, 'Analytic Training', the emphasis was on training cochlear implant recipients to perceive fine speech contrasts, such as the difference between long and short vowels or between two- and three-syllable words. Analytic training aims to improve the ability to accurately discriminate speech cues from which sentences are constructed, by presenting individual speech components in isolation. By contrast, synthetic training, using a top-down approach, provides an approximation of the speech perception tasks found in everyday communication.

The phrases and sentences of speech and conversation are contextually-based exchanges of words which are related in several ways:

- syntactically (related to sentence construction and grammatical rules)
- semantically (related to the meaning of, and associations between, words)
- pragmatically (related to the purpose or intention of the sentence).

Through the use of phrases and sentences, synthetic training allows the recipient to take advantage of the same linguistic and situational redundancy that exists in everyday listening situations. Practicing these phrases and sentences builds the recipient's skills in, and awareness of, linguistic and contextual predictability and other compensatory strategies, and helps them understand partially heard speech.

In this chapter, different synthetic training exercises are described. Suggestions are made for modifying the exercises to increase or decrease the level of challenge. Many exercises will work equally well in telephone training.[29]

The clarification strategies on the next page can also be printed from the CD, as well as from Appendix 2.

Much of the work in aural rehabilitation in the last twenty years has been adapted from early work by Jeffers and Barley, and later developed from Erber; and Kaplan, Bally and Garretson[30]. Exercises from these valuable resources have been developed with the cochlear implant recipient in mind. Readers are encouraged to refer back to these texts for the original versions of these exercises. See Appendix 3 for the full sources.

[29] Giles, 2005
[30] Jeffers and Barley, 1971; Erber, 1982, 1985; Kaplan, Bally and Garretson, 1985.

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Clarification Strategies

Many of the synthetic training exercises in this guide encourage the recipient to confirm or clarify words, phrases or sentences by requesting clarification. Rather than repeat these strategies in each exercise, they are summarised below.

1 Please say that again.

2 Please repeat the first / last word / the last few words.

3 Did you say ……..?

4 Please use a different word.

5 Could you say that another way?

6 What was the word that came after ……...?

7 Please would you spell that word?

8 Are you talking about ……..?

9 Please talk more slowly.

10 Please use shorter sentences.

11 Please use a louder voice.

This page can be removed from the guide and photocopied as an aid to the recipient and a focus for discussion during auditory training. It can be more easily photocopied from Appendix 2, and adapted or printed from the CD.

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1 Continuous Discourse Tracking (CDT)

Continuous discourse tracking (CDT) can be used as an analytic, synthetic or communication therapy task. Developed to assess the speed of information transfer from the speaker to the receiver, CDT measures the number of words successfully received by the receiver per minute, and progressively increases the amount of text successfully transmitted.[31] The exercise is repeated regularly, with the aim of showing measurable improvement in the recipient's speech perception. This information can provide the recipient with concrete and positive feedback, and may be used to evaluate changes to mapping or listening programs, for example.

The information in this chapter relates to CDT as a synthetic exercise, so the focus is on the performance of the recipient. The responsibility for repair when the text is not faithfully repeated is solely on the clinician. Compare this methodology with that in the 'Communication Therapy' chapter, where the recipient and clinician are mutually responsible for repairing the breakdown.

For a more detailed discussion of CDT, see pages 190–194 of the 'Communication Therapy' chapter.

Tracking with speed

Materials

The clinician uses a passage of text that is unfamiliar to the recipient. This may be a passage from a novel, newspaper or magazine. The choice of material is important if consistency between sessions is to be maintained. Ideally, the texts should be of similar grammatical difficulty and style, and have a similar range and difficulty of vocabulary.

By using texts that contain several thousand words, the clinician can read from the same source each week. A source that meets these criteria is the graded readers, which are written to develop literacy skills and to teach English as a second language.[32]

A session that lasts from about three to five minutes to a maximum of ten minutes is recommended, depending on the concentration level of the recipient.

Method

The recipient is informed that the goal is to do the task in the auditory-only condition as quickly as possible, so the best possible score can be obtained. The clinician reads the text aloud in small segments or in phrases of up to seven words at a time. (The use of segments that are too long can change the task from one of speech perception to one of auditory recall. In elderly recipients, particularly, this will confound the measures.)

[31] De Fillippo and Scott, 1978
[32] MacLean, 1992

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The recipient, sitting opposite the clinician, is asked to repeat the segment back as faithfully as possible. The recipient is encouraged to guess at all times since the breakdown can be repaired more quickly when the text is partially heard rather than not heard at all.

The clinician is responsible for resolving any communication breakdown. As the method and time taken to repair can influence the outcome measure, repair should be done as quickly as possible or at least in a consistent manner between sessions.

Table 3. Four types of breakdown and the clinician's response

Recipient's response	**Example**	**Clinician's response**	**Example**
Text all repeated correctly	He put his torn jacket onto the table	Read next segment	
Segment partially repeated	He put his jacket down	Repeat segment	
Segment repeated incorrectly	He put his **worn** jacket onto the table	Repeat segment with emphasis on incorrect word or words	…his **torn** jacket…
Segment missing a word	He put his torn jacket on the table	Repeat segment with emphasis on the missing word	He put his torn jacket on**to** the table
Unable to repeat segment at all		Repeat segment with modifications; for example, slower rate, louder voice level, reduced phrase length, or with visual cues or written clues for difficult words	He put… …his torn jacket… …onto the table

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Table 4. Clinician's response to issues that may arise during sessions

Issue	Clinician's response
Recipient finds first passage difficult as they are inexperienced at the task or the text is new.	Give the recipient the first passage to read so they get used to the writing style, or read the first segment to them, with visual cues. These are useful ways of introducing the task and demonstrating the repair system. Timing should not begin until the task is performed in the auditory-only condition.
Recipient requires several attempts to correctly perceive one or two words.	Repeat the whole section to re-establish the context and flow of the text.
Recipient continues to have difficulty with one particular word or phrase.	Replace it with a synonym in the same context.
The text contains many proper nouns; for example, character names or place names.	Give the recipient a written list of the proper nouns so their performance is not slowed by poor perception of words for which there are no context cues.

DVD

Scene 9: CDT – speed

Increasing the difficulty of the tracking task

This task should initially be performed with the recipient facing the clinician, in quiet listening conditions. The clinician should use clear and well-paced speech. Once the recipient is comfortable with this, the task can be made more difficult.

Several changes can be made. The task can be performed in background noise using a radio, a cassette player with music, radio static or a talkback radio program. The task can be performed by another staff or family member, or by using an unfamiliar voice such as one in a talking book.

Clinicians should be cautious about comparing tracking rates across sessions, particularly as there are multiple sources of variability in the task. However, if the scores are to be compared between sessions, it may be useful to standardise the background noise by using, for example, four-talker babble at a fixed level. The distance between the clinician and the recipient can also be increased to reduce the stimulus level and the high frequency cues.

DVD

Scene 10: CDT – noise

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2 Fill in the Sentence

In a sentence completion exercise (gap-filling or CLOZE task), the recipient uses analytic and synthetic skills to complete the sentence. The missing information may be a word or phrase but it must be semantically correct. The missing information may be at the beginning, middle or end of the sentence.

The recipient is presented with a printed list of incomplete sentences (for example, 'I left my…….. in the bathroom'). The clinician reads the first sentence without visual cues and the recipient attempts to repeat the missing word or phrase. Initially, the missing word should be highly predictable. The same sentence is then repeated using less predictable words and phrases (for example, 'toothbrush', 'make-up', 'clothing', 'towel and hairdryer').

The recipient may be reminded to attend to aspects such as rhythmn, and syllable or word number, to determine the number of missing words. The recipient then uses context and semantic cues to supplement the auditory information.

Gap-filling exercises can be:

- **closed-set** – where a list of the missing words or phrases are provided with alternative words or phrases, so the recipient must make a choice from a set of options – *see exercise 2.0* [33]
- **open-set** – where no words or phrases are provided to the recipient – *see exercise 2.1*.

Exercises

2.0 Fill in the sentences – fill in the gap
2.1 Fill in the sentences – pseudo open-set version

[33] Modified from Plant, 1991, Syntrex, NAL, Australia.

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3 Closed-set Task Using Visual Cues

To vary the stimuli, particularly to assist recipients with lower literacy levels, a closed-set task may employ a set of pictures instead of a list of sentences. The pictures each depict a different activity or scene. The recipient listens to a description of one of the pictures in the auditory-only condition (for example, 'It has a long neck and it lives in Africa'). The recipient is then asked to identify the picture. This task encourages the recipient to listen for key words and wait for all the information.[34]

Exercise

3.0 Closed-set visual identification task

[34] NSW Department of School Studies, 1990. Courtesy of the NSW Department of Education and Training.

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4 Topic of Conversation

Topic clues

Exercises 4.0 to 4.6 demonstrate the value of prior information in enhancing speech perception. As a conversation progresses, the recipient uses the context of the previous sentence as a cue. The clinician can discuss with the recipient the value of topic clues in:

- reducing the number of possible alternatives for words misperceived or not heard at all
- reducing errors in conversation
- anticipating the vocabulary used in a telephone conversation or meeting – for example, if the topic is dining out, the recipient will be expecting vocabulary and phrases associated with food and eateries.

Restricting the potential subset of words can reduce the effort of listening, leaving the recipient with more energy to attend to the message. The particular importance of topic clues when listening conditions are less than ideal, such as in background noise or a reverberating room, can also be discussed with the recipient.[35]

At first, the recipient may be reluctant to respond unless they are sure they have understood the message. For the exercises to be most effective, however, the recipient should be strongly encouraged to guess. The clinician can confirm all words that were correctly perceived so more topic clues are available for the next attempt.

The topic clue may be presented with or without visual cues, according to the recipient's ability. The clinician may also choose to discuss the topic with the recipient before commencing the exercise.

Topic clues can also be used with semantic cues to allow the recipient to predict how a phrase will finish, for example, 'five dollars and ten…….. '.

If the recipient is unsuccessful after several trials, the activity should be modified.

Topic clues can be provided at a number of levels. The recipient may be given:

- a clue picture the clinician may ask questions or make statements about
- the topic word which relates to the target sentences and vocabulary in them (for example, 'mail', 'books') – see *exercises 4.0 and 4.1*, and scene 11 on the DVD
- a clue phrase (for example, 'In the summer…….. ', 'Before you go home…….. '), which may be in different positions in the target sentences to vary the difficulty – see *exercises 4.2 to 4.4*, and scene 12 on the DVD
- a clue word where the word is contained in each sentence
- a clue sentence that provides the subject matter but not necessarily any words in the target sentences (for example, 'Oak trees lose their leaves in autumn') – see *exercise 4.6*, and scene 13 on the DVD.

[35] Erber, 1988

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If the recipient finds the transition from closed-set to open-set tasks difficult, the topic-related sentences may be closed-set (see *exercise 4.5*). The recipient may be encouraged to listen for key words that can help them to identify the correct sentence.

For the recipient whose speech perception is approaching open-set level, the task can be extended in several ways:

- The topic for each target sentence may be more indirectly related to the vocabulary in the sentence.
- The clinician may extend an existing exercise by asking the recipient questions related to a topic previously used as a repetition-only task (for example, 'books', 'sport'). In this case, the recipient should answer the question rather than repeat it. This provides an introduction to open-set and comprehension tasks.
- The clinician may use less common vocabulary and longer sentences. This material can also introduce the recipient to clarification strategies (see 'Clarification Strategies' section).

Exercises

4.0 Topic of conversation – key topic and word clues
4.1 Topic of conversation – topic clue only
4.2 Topic of conversation – key phrase clues in initial position
4.3 Topic of conversation – key phrase clues in middle position
4.4 Topic of conversation – key phrase clues in final position
4.5 Topic of conversation – sentence clue
4.6 Topic of conversation – key topic sentence clues

DVD

Scene 11: Topic of conversation – word clue
Scene 12: Topic of conversation – phrase clue
Scene 13: Topic of conversation – related sentence clue

Unrelated sentences with clue words

One of the most difficult activities requires the recipient to recognise unrelated sentences with clue words (see *exercises 4.7 to 4.10*). When the sentences do not share a common topic, the recipient has to constantly rethink the possible vocabulary and semantic context. This is a particularly valuable exercise for recipients who find it difficult to follow conversations or meetings where the topic of conversation frequently changes.

Exercises

4.7 Topic of conversation – unrelated sentences with clue words (set A)
4.8 Topic of conversation – unrelated sentences with clue words (set B)
4.9 Topic of conversation – unrelated sentences with clue words (set C)
4.10 Topic of conversation – unrelated sentences with clue words (set D)

DVD

Scene14: Topic of conversation – unrelated sentence clue

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5 Context Cues

Context or situational cues assist speech perception by allowing the recipient to anticipate words, topics and phrases. Possible interpretations of partially perceived words or phrases can be accepted or rejected based on the appropriateness of the context. Context also allows the recipient to anticipate the vocabulary. The context may be provided by the environment (for example, doctor's surgery, library, supermarket) or by the speaker (for example, mother, policeman, teacher). In *exercise 5.2*, the sentences are not only related to a common situation (for example, 'at the bank'), but contain many familiar phrases.[36] In such exercises, the recipient may draw on the many linguistic clues in the sentences.

The clinician can create additional discussion on context cues by asking the recipient to anticipate phrases and words that would be used in the context of their own workplace, the audiology clinic, the workplace of a person they visit regularly (for example, a physiotherapist) or a recreational location (for example, a library or bridge club).

Exercises

5.0 Context cues – contextually cued sentences
5.1 Context cues – common sentences
5.2 Context cues – common situations

DVD

Scene 15: Context cues – common situations

[36] Plant, 1984, Commtram, NAL, Australia.

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6 Information Transfer Activities

Following instructions

This speech perception task differs from other everyday communication in that it often requires the recipient to attend to all the words, and not simply get the general idea or gist. Examples include being able to follow:

- instructions from the doctor for taking medication
- directions to someone's home
- information about completing a form
- a recipe given verbally
- instructions about where to find a missing object.

Instruction-following exercises encourage the recipient to develop a number of skill areas, including:

- the ability to attend to detail
- the skill of listening to all the information; this can be quite a challenge for a recipient whose discrimination prior to implantation was so impaired that people tended to speak to them in short or incomplete sentences – such recipients may develop the habit of interrupting the speaker part-way through a sentence.
- the skill of listening for key words
- the ability to use clarification strategies – see 'Clarification Strategies' section on page 84.

Instruction-following tasks provide excellent tools for introducing clarification strategies and moving the recipient into communication training (see pages 184–185 in the 'Communication Therapy' chapter). When the recipient's frequent conversation partner is included in the exercise, it can be a valuable way to demonstrate how much information the recipient can realistically absorb at one time.

Methods

Instruction-following may take the form of a direction-following task using a map.[37] The recipient may be asked to follow directions given by the clinician, or to give directions from place A to place B.

Information transfer activities

Information transfer activities are instruction-following tasks for two people. These activities were originally written for teachers of English as a second language. In these activities, the speaker has access to all the information and attempts to impart it to the listener. One example, replicated in *exercise 6.1*, uses a drawing of a room in a house onto which various items must be drawn. The clinician has the complete drawing with all the objects in place. The recipient has a drawing of the empty room with most of the objects drawn and labelled separately at the

[37] Plant, 1984, Commtram, NAL, Australia.

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bottom of the page.[38] This provides the recipient with visual and vocabulary clues to assist in discrimination and recognition.

As the recipient gains confidence, the clinician can use progressively longer and more complex instructions with more clauses, for example, 'Put the vase and the clock on the right-hand side of the top shelf'. The recipient is encouraged to confirm that the message has been correctly perceived by repeating it, and to seek clarification of any part of the instruction that was missed or misperceived.

If the clinician is also working on communication training with this recipient, the instructions can be given in inappropriate ways, for example, too quickly or too softly. The recipient is then encouraged to identify the problem and request the speaker to make specific changes. For more information on this, see pages 184–185 in the 'Communication Therapy' chapter.

Difficulty can also be increased by embedding the relevant material in a sentence, for example, '...and now I would like you to put..... ', to encourage the recipient to identify the relevant part of the utterance.

Another example uses a grid of 20 squares – see *exercise 6.0*. The recipient must carefully follow two directions: which square is being referred to, and what to draw or write in it. For example, the clinician may say: 'Go back to the square with the drawing of the sun. Go right three squares and write today's date.' The task can easily be modified to increase or reduce the difficulty so the recipient is achieving but continues to be challenged.[39]

Barrier games are another example of information transfer – see *exercise 6.2*.[40] In this task, the clinician and the recipient have an identical set of objects or pictures. The clinician instructs the recipient to place the items in a particular order or arrange them in a certain way. One or several instructions may be given. The clinician performs the same manoeuvres with their own items, which are obscured from the recipient's view by a barrier. When the task is completed, the barrier is removed and the two sets of objects are compared. This can be a useful task for a recipient with lower levels of literacy or for whom English is a second language.

Complete the missing information

In this information transfer activity, the clinician and recipient each have half the information and the pair work together to gain all the information. In *exercise 6.3*, both the recipient and clinician begin with a description of a rental property. Different information is missing in each description. Both parties must gain all the information by asking each other questions.[41] The recipient gains experience in listening to the answers to questions **and** listening to the clinician's requests for information.

[38] Watcyn-Jones, 1997. Reproduced by permission of Penguin Books Ltd.
[39] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.
[40] Plant, 1991, Syntrex, NAL, Australia.
[41] Watcyn-Jones and Howard-Williams, 2001. Reproduced by permission of Penguin Books Ltd.

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Exercises

6.0 Information transfer – complete the grid
6.1 Information transfer – complete the drawing
6.2 Information transfer – describe, perceive and draw
6.3 Information transfer – complete the missing information

DVD

Scene 16: Information transfer
Scene 17: Information transfer – complete the grid
Scene 18: Information transfer – complete the drawing

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7 Variations on Open-Set Tasks

This level of activity may provide a useful bridge between closed- and open-set tasks for a recipient who is not confident enough to move to completely open-set tasks. In an open-set 'fill-in-the-sentence' task, the recipient has a list of incomplete sentences in front of them or a passage with missing words – see *exercise 7.0*. The written incomplete sentences or text give the recipient topic clues, and context and semantic cues.[42]

The clinician says the complete sentence or reads the complete passage. The recipient attempts to repeat or write down the missing word or phrase.

The material used in *exercise 7.0* is more challenging than the CLOZE exercises in section 6 as the material is unfamiliar and less predictable. To adjust the degree of difficulty, the amount of material missing, its position in the sentence and the familiarity or otherwise of the vocabulary can be manipulated.

Another form of pseudo open-set training uses complete phrases that are part of a well-established set and are known to most people (for example, proverbs[43] or famous quotes). Although each phrase may be given without any clues other than the fact it is a proverb, both the overlearned nature of the stimulus and its membership of the set aid recognition.

Exercise

7.0 Open-set fill in the sentence

DVD

Scene 19: Open-set fill in the sentence

[42] Adapted from Watcyn-Jones and Howard-Williams, 2001.
[43] Plant, 1984, Commtram, NAL, Australia.

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8 Sentence Predictability

So far, the synthetic exercises in this chapter have demonstrated the value of syntactic, topic and context cues to aid the recipient's speech perception. In this section, *exercise 8.0* can be used to demonstrate to the recipient that by manipulating the way in which questions are phrased, the answer to a question can be made more or less predictable. The benefit of manipulating questions to make the answer more predictable, particularly in adverse listening conditions, can be discussed with the recipient.

Single-scripted conversation

In *exercise 8.0*, the recipient has the script for one side of a dialogue. They have a list of questions with which to 'interview' the clinician. In scene 20 of the DVD, the recipient asks the clinician questions about 'the place where you were born'.[44] The questions range from limited-choice questions, which significantly reduce the possible range of answers, to open-ended questions.

The clinician may discuss with the recipient which answers they found easier to follow and how manipulating the predictability of the answer can be used as a compensatory strategy to aid speech discrimination.

An exercise of this type is also described on page 187 of the 'Communication Therapy' chapter.

Exercise

8.0 Single-scripted conversation

DVD

Scene 20: Single-scripted conversation

[44]Based on Erber, 1988.

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9 Seeking Information

In this task, the clinician and recipient role-play a conversation in which the recipient is seeking information in a specific context. The recipient may be provided with only a brief description such as, 'I would like you to imagine you are calling the railway station to book a ticket' or 'Imagine you are calling the clinic to request a replacement cable for your speech processor' (see *exercise 9.0* and scene 21 on the DVD). The clinician takes the role of the booking office clerk or audiologist, and may work from a list of questions that are likely to be asked in that situation. The recipient must answer the questions and is encouraged to use clarification strategies. The clinician may extend the task by asking less predictable or more complex questions.

In an alternative exercise, the recipient may be provided with basic information they must use to perform a task, for example, they are given a newspaper advertisement they must use to book a holiday. In *exercises 9.1 and 9.2*, and in scene 22 on the DVD, the recipient has an advertisement relating to various activity weekends.[45] The recipient's task is to seek relevant further information and make a booking. The clinician provides the information at a level of complexity to suit the recipient.

Exercises

9.0 Seeking information – role-play exercises
9.1 Seeking information – wayout weekend role-play
9.2 Seeking information – wayout weekend role-play (Australia and England)

DVD

Scene 21: Seeking information – buying a train ticket
Scene 22: Seeking information – wayout weekend

[45] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.

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10 Open-Set Sentences

Some recipients may not be able to perceive sentence stimuli without prior context cues, while others may be able to perceive sentence stimuli with open-set materials. In either case, the unrelated sentences in *exercise 10.0*, which vary in the amount of redundancy present, may be useful. The recipient is encouraged to guess, and the clinician confirms any correctly repeated words to provide additional information for subsequent trials (that is, repeat presentations of the same stimulus). If the recipient finds the task difficult, the clinician may provide the related topic, a context cue or a key word.

This task can be extended by employing open-set, overlearned questions. In this case, the recipient can be asked to confirm the question and provide an answer. This can be a useful link into comprehension tasks.

Exercise

10.0 Open-set sentences – no clue words

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11 Comprehension Tasks

In a comprehension task, the recipient uses listening and comprehension skills, and gives an interactive rather than an imitative, repetitive or identifying response. The task enables the recipient to improve their auditory memory by using information received from their implant.

An introduction to this form of exercise may be a list of highly familiar 'questions about you', to which the recipient is asked to respond. The questions may be increased in length or complexity as the recipient's confidence increases.

In passage comprehension tasks, the recipient listens to a whole passage before answering questions related to it. The clinician may establish some level of comprehension by discussing the topic of the passage with the recipient before moving on to the questions. The questions may all relate to the content (easier option) or more generally to the passage. Excerpts the recipient provides from magazines, newspapers or written material, may provide alternative stimuli.

Passage comprehension tasks provide an opportunity to discuss listening for meaning rather than exact recall. How this skill can be generalised for everyday life, for example, listening to a play on the radio, may be discussed.

Exercises

11.0 Easy interactive stories
11.1 Intermediate interactive stories
11.2 Advanced interactive stories

DVD

Scene 23: Interactive stories

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12 Two-Scripted Conversation

In this task, the recipient and the clinician each play different roles in a pre-scripted conversation. The recipient and clinician alternately read from their scripts, listen to the other person's responses, and respond appropriately.

In *exercise 12.0*, the recipient plays the role of someone shopping and is provided with a shopping list and a script. The clinician has a picture of the goods for sale and the prices as well as their script.[46] While the conversation follows a set form, there is some scope for improvisation. The clinician may also elaborate on the answer or embed the answer in a longer reply.

The exercise may be used to highlight many of the skills acquired in the use of synthetic material, including use of situational context, topic clues, prior context, limited-choice questions and focusing on the message. The exercise provides ample opportunity for the recipient to use clarification strategies.

Exercise

12.0 Two-scripted conversation – shopping role-play

[46] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.

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13 Games and Interactive Activities

Synthetic training requires the clinician to be creative and imaginative. A variety of tasks should sustain the recipient's interest, and also distract them from the formality and stress of what can be perceived as a 'test' situation.

To this end, almost any board or card game, either children's or adults', can be adapted for use in a clinical setting.

A very simple example of this is the children's game, 'Who Am I?' in which a person asks Yes/No questions to establish the identity of a person or object whose name has been supplied to the others but has been kept secret from the person asking the questions. In this game, the participants take turns to describe features of their chosen person, who then has to be identified from the descriptions.

The level of game can be as simple or as difficult as required. The clinician can alter the length or familiarity of the phrases used, restrict the game to a closed-set of items such as a deck of cards, or even create a version of Chinese Whispers, where the spoken content can be wildly varied and unpredictable.

The clinician should use their imagination to create games that will break the ice and provide a fun atmosphere for practicing listening and repair skills.

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Exercises

In the following exercises, the words 'Clinician' and 'Recipient' appear in the top right-hand corner of the exercise, to indicate their intended use:

- **Clinician**: contains the full list of potential presentation items
- **Recipient**: guide for the recipient to follow the exercise.

Where there are separate 'Clinician' and 'Recipient' pages, the 'Clinician' page should not be shared with the recipient.

For more information on clarification strategies, see 'Clarification Strategies' section on page 84 of this chapter.

For material obtained from published sources, an acknowledgement appears in the lower left-hand corner, and the full source appears in Appendix 3.

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Exercise 2.0 Fill in the sentences – fill in the gap[47]

Clinician

Instructions
Give the recipient their copy of this exercise (see next page). Read the sentences one at a time, speaking one of the words from the alternatives. Ask the recipient to identify the word spoken from the alternatives.

1 If you don't stop fighting I'll call the .....
Alternatives: police, teacher, cops

2 I like milk in my .....
Alternatives: coffee, tea

3 Did you read the ..... this morning?
Alternatives: paper, newspaper, magazine

4 I went to the movies last .....
Alternatives: night, week, Saturday, weekend

5 The crowd gave a loud .....
Alternatives: cheer, cry, yell, shout

6 The man cut down the .....
Alternatives: tree, bush, fence

7 We are going to the football ..... this afternoon.
Alternatives: match, game, ground

8 The boy opened the .....
Alternatives: door, gate, present, window

9 The butcher sold the ..... to the customer.
Alternatives: meat, sausages, steak

10 She put the flowers in the .....
Alternatives: vase, bin, water, garden

11 I put the ..... on the letter.
Alternatives: stamp, address, date

12 Open the ..... and let in some light.
Alternatives: curtains, blind, window

[47] Modified from Plant, 1991, Syntrex, NAL, Australia.

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Exercise 2.0 Fill in the sentences – fill in the gap[48]

Recipient

Instructions
The clinician will read out each sentence, speaking one of the alternatives you have before you to complete the sentence. Tell the clinician which alternative was spoken.

1 police, teacher, cops

2 coffee, tea

3 paper, newspaper, magazine

4 night, week, Saturday, weekend

5 cheer, cry, yell, shout

6 tree, bush, fence

7 match, game, ground

8 door, gate, present, window

9 meat, sausages, steak

10 vase, bin, water, garden

11 stamp, address, date

12 curtains, blind, window

[48] Modified from Plant, 1991, Syntrex, NAL, Australia.

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Exercise 2.1 Fill in the sentences – pseudo open-set version[49]

Recipient

Instructions
Read the incomplete sentences below. Then listen as the whole sentence is read to you. Try to repeat the words used to complete the sentence. Ask the clinician to repeat the sentence if necessary.

1 If you don't stop fighting I'll call the .....

2 I like milk in my .....

3 Did you read the ..... this morning?

4 I went to the movies last .....

5 The crowd gave a loud .....

6 The man cut down the .....

7 We are going to the football ..... this afternoon.

8 The boy opened the .....

9 The butcher sold the ..... to the customer

10 She put the flowers in the .....

11 I put the ..... on the letter.

12 Open the ..... and let in some light.

[49] Modified from Plant, 1991, Syntrex, NAL, Australia.

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Exercise 3.0 Closed-set – visual identification task[50]

Clinician

Instructions
Give the recipient the drawing on the next page. (This drawing can also be photocopied from Appendix 2.) Clinicians may use the following sentences or create sentences of their own, to describe one of the pictures on the drawing. Ask the recipient to identify the picture being described.

1 It's a large storm in the tropics.

2 It's something you use to lift up a car so that you can change the wheels.

3 It's long and thin and children colour with it.

4 It's something you may eat in hot weather.

5 They have wheels and you wear them on your feet.

6 It's big and hot and it's in the sky.

7 This has numbers and you might use it to talk to someone.

8 It can be large or small and children go there to learn.

9 It makes honey but it can sting.

10 Many people keep one of these as a pet.

11 It's manufactured, full of water and you can swim in it.

12 It grows on your head and you can cut it.

[50] NSW Department of School Studies, 1990. Courtesy of the NSW Department of Education and Training.

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Exercise 3.0 Closed-set – visual identification task[51]

Recipient

[51] NSW Department of School Studies, 1990. Courtesy of the NSW Department of Education and Training.

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Exercise 4.0 Topic of conversation – key topic and word clues

Clinician

This exercise consists of sentences that are common to one topic but not directly related to a given situation.

Instructions

1 Explain to the recipient that the task is to use the topic clue to help them repeat the sentence.
2 Present the topic with visual cues, or let the recipient read the topic clue.
3 Present the sentence slowly with normal intonation but without visual cues, and ask the recipient to repeat it.
4 Encourage the recipient to use strategies to confirm or clarify the sentence, such as:

- 'Repeat.'
- 'Did you say ....?'
- 'Are you talking about .....?'
- 'Can you say it a different way?'

5 Confirm any words correctly repeated after each presentation.
6 If, after three presentations, the sentence was not understood, provide a **key word** from the sentence. (Examples are underlined in the exercises.)
7 If the recipient cannot recognise the clue words, the following are examples of prompts that may provide additional clues (these relate to clue topic C):

- 'It's not a blue colour, it's red.'
- 'In winter, you need a thick pair of socks.'
- 'Don't take it away, bring it to me.'
- 'You put gloves on your hands in the winter.'
- 'Shoes are worn on your feet.'
- 'It's not a shirt, it's a jacket.'
- 'You wear clothes on your body.'
- 'When you have clothes on, you are wearing them.'
- 'The opposite of earliest is latest.'
- 'Looking through the shops is called shopping.'
- 'Women wear skirts or dresses.'
- 'A sash around your neck is a scarf.'
- 'People wear clothes.'

8 Allow the recipient to listen to the sentence three times in the auditory-only condition before adding visual cues.
9 If visual presentation is required, always provide an opportunity for the recipient to hear the sentence again without visual cues.

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Clue topic A: Television

1 What are you watching?
2 Turn on the news.
3 I'm sick of all these commercials.
4 There's a good movie on tonight.
5 I like watching sports on TV.
6 Who was the leading actor in that movie?
7 Do you have a video recorder?
8 Turn off the TV before you go to bed.
9 I stayed up late to watch a movie.

Clue topic B: Books

1 Have you read any good books lately?
2 I've nearly finished reading it.
3 Who was the author of that book?
4 I always buy paperbacks.
5 I am reading a novel at the moment.
6 I can't remember that story.

Clue topic C: Clothing

1 Where is my red shirt?
2 I bought a new pair of socks yesterday.
3 It's very cold so bring a jacket.
4 I took off my hat and gloves.
5 I have some new shoes.
6 There is a hole in my jacket because it's so old.
7 I like old clothes.
8 Did you see what she was wearing?
9 Have you seen the latest fashion?
10 I'm going shopping to buy some jeans.
11 Do you think my shoes match my dress?
12 I bought some wool to knit a scarf.
13 What are you wearing to the party?

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Exercise 4.1 Topic of conversation – topic clue only

Clinician

This exercise consists of sentences that are common to one topic but not directly related to a given situation.

Instructions

1 Explain to the recipient that the task is to use the topic clue to help them repeat the sentence.
2 Present the topic with visual cues, or let the recipient read the topic clue.
3 Present the sentence slowly with normal intonation but without visual cues, and ask the recipient to repeat it.
4 Each sentence should be presented a maximum of three times to the recipient. If the recipient still does not repeat the whole sentence, present it again using visual cues.

Clue topic A: Seasons

1 I enjoy summer evenings.
2 Do you go skiing in the winter?
3 It was the hottest summer on record.
4 Winter, it's too cold for me.
5 I eat a lot of fruit in the summer.
6 Fruit trees blossom in the spring.

Clue topic B: Occupations

1 I work very hard.
2 My father was a carpenter.
3 I always wanted to be a doctor.
4 He studied hard to become a lawyer.
5 She left school at fifteen to go to work.
6 You must train for many years to become a teacher.
7 What do you do?
8 Have you got a job?
9 Unemployment is a major problem.
10 I work in a supermarket.
11 I got a raise last week.
12 I'm looking for a new job.
13 It is important to have experience for many jobs.
14 I took the day off work.
15 My job is very challenging.
16 He works in the city.

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Clue topic C: Mail

1 I got a letter from a friend in London.
2 The postman comes at twelve o'clock.
3 I received a postcard from Bermuda.
4 You should write to your mother more often.

Clue topic D: Weather

1 What was the maximum temperature today?
2 There may be hail tomorrow.
3 The weather forecast is for more rain.
4 I hope we have good weather for the weekend.

Clue topic E: Movies

1 I went to see a movie last night.
2 It costs a lot of money to make films these days.
3 I always cry when I see a sad movie.
4 Do you think that movie is worth seeing?

Clue topic F: Sports

1 We won the baseball game yesterday.
2 Which football team do you follow?
3 I am in training for the marathon.
4 You would lose some weight if you exercised regularly.
5 Do you want to play tennis?

Clue topic G: Health

1 You are looking well.
2 How are you feeling?
3 I caught a cold.
4 I've had a sore throat.
5 Did you see the doctor?
6 I have been taking some medicine.
7 Are you feeling sick today?
8 You should eat more vegetables.

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Exercise 4.2 Topic of conversation – key phrase clues in initial position

Clinician

Instructions

1 Using visual cues and sound, present the phrase clue for the set of sentences to the recipient. Explain that the phrase will occur in each sentence. They can use any of the clarification strategies.
2 Speak a sentence. If the recipient cannot repeat all the sentence, say it twice more without further clues. Always allow the recipient to listen to the entire sentence in the auditory-only condition before adding further clues.
3 If the recipient continues to have difficulty, add a word or visual cues.

N.B: There is no recipient's form for this exercise since the phrase clues are given with lip reading.

Phrase clue A: During the summer ...

1 During the summer, many people take a holiday.
2 During the summer, children play sports outdoors.
3 During the summer, beaches are usually crowded.
4 During the summer, the weather is very warm.
5 During the summer, it's important to drink plenty of water.

Phrase clue B: On your birthday ...

1 On your birthday, people send greeting cards.
2 On your birthday, you may have a special cake.
3 On your birthday, family and friends bring gifts.
4 On your birthday, it's fun to eat out at a favourite restaurant.
5 On your birthday, people often telephone with good wishes.

Phrase clue C: At the weekend ...

1 At the weekend, people go shopping.
2 At the weekend, children take part in sports.
3 At the weekend, there is time to relax.
4 At the weekend, many people spend time with their families.

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Exercise 4.3 Topic of conversation – key phrase clues in middle position

Clinician

Instructions

1 Using visual cues and sound, present the phrase clue for the set of sentences to the recipient.
2 Explain that the phrase will occur in each sentence.
3 Speak a sentence. If the recipient cannot repeat all the sentence, say it twice more without further clues. Always allow the recipient to listen to the entire sentence in the auditory-only condition before adding further clues.
4 If the recipient continues to have difficulty, add a word or visual cues.

N.B: There is no recipient's form for this exercise since the clue phrases are given with lip reading.

Phrase clue A: ... is my favourite ...

1 Blue is my favourite colour.
2 Chocolate cake is my favourite dessert.
3 Strawberry is my favourite ice cream.
4 Morning is my favourite time of the day.

Phrase clue B: ... is the first ...

1 January is the first month of the year.
2 Monday is the first working day of the week.
3 Who is the first child in your family?
4 When is the first day of summer?

Phrase clue C: ... will make you ...

1 A lot of money will make you rich.
2 Those clothes will make you look nice.
3 Too many sweets will make you fat.
4 Exercise will make you healthy.
5 Staying up late will make you sleepy.

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Exercise 4.4 Topic of conversation – key phrase clues in final position

Clinician

Instructions

1 Using visual cues and sound, present the phrase clue for the set of sentences to the recipient.
2 Explain that the phrase will occur in each sentence.
3 Speak a sentence. If the recipient cannot repeat all the sentence, say it twice more without further clues. Always allow the recipient to listen to the entire sentence in the auditory-only condition before adding further clues.
4 If the recipient continues to have difficulty, add a word or visual cues.

N.B: There is no recipient's form for this exercise since the clue phrases are given with lip reading.

Phrase clue A: ... before you go home.

1 Finish your work before you go home.
2 Call me before you go home.
3 Stop at the store before you go home.
4 Put this in your car before you go home.
5 I need to see you before you go home.

Phrase clue B: ... in the summertime.

1 The weather is hottest in the summertime.
2 I like swimming in the summertime.
3 Children are out of school in the summertime.
4 A variety of flowers bloom in the summertime.
5 Rain is refreshing in the summertime.

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Exercise 4.5 Topic of conversation – sentence clue

Clinician

Instructions

1 Using visual cues and sound, present the sentence clue for the set of sentences to the recipient.
2 Speak a sentence from the recipient's list below. Ask the recipient to choose the sentence that you said. Repeat the sentence if necessary.
3 If the recipient is still having difficulty, add one word at a time with visual cues, alternating between sound-only and sound with the visual cues, until the entire sentence is identified or repeated correctly.
4 Once the sentence is repeated correctly, allow the recipient to listen to the entire sentence in the auditory-only condition.

Sentence clue: There is enough telephone cable under New York to stretch from Earth to Venus.

1 Venus is almost 26 million miles from Earth.

2 The telephone plays a very important part in business and commercial activities.

3 New York has nearly 26 million miles of telephone cable.

4 In New York City, telephone cable is buried beneath the ground.

5 Telephone messages are carried from the speaker to the listener by means of a cable.

6 Telephone messages go between a speaker and a listener.

7 Earth is a planet.

8 Venus and Earth are planets.

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Exercise 4.5 Topic of conversation – sentence clue

Recipient

Instructions
Listen to the sentence clue. You may use visual cues if you wish. Then listen to the sentence the clinician says next, and choose which sentence they said.

Sentence clue: There is enough telephone cable under New York to stretch from Earth to Venus.

1 Venus is almost 26 million miles from Earth.

2 The telephone plays a very important part in business and commercial activities.

3 New York has nearly 26 million miles of telephone cable.

4 In New York City, telephone cable is buried beneath the ground.

5 Telephone messages are carried from the speaker to the listener by means of a cable.

6 Telephone messages go between a speaker and a listener.

7 Earth is a planet.

8 Venus and Earth are planets.

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Exercise 4.6 Topic of conversation – key topic sentence clues

Clinician

Instructions

This is the first exercise in the 'Synthetic Training' section that may be considered open-set.

Present the written sentence clue to the recipient. Then say one of the related sentences without visual cues and ask the recipient to repeat as many words as possible. If necessary, repeat the sentence in the auditory-only condition.

Use the following techniques to increase the chance of success and maintain motivation:

- After each response, always tell the recipient which words were correct.
- Review and repeat the topic sentences and key words.
- Provide additional key words (which may or may not be in the sentence).
- Provide one review of the sentence in the auditory-only condition.

Sentence clue A: Oak trees lose their leaves every year.

1 When summer is over, some trees lose their leaves.

2 Leaves can change colour.

3 Some trees are bare in winter.

4 Oak trees are good to climb.

5 It's fun to play in piles of dry leaves.

6 Oak trees grow acorns.

Sentence clue B: While it is young, the baby kangaroo is kept safe and warm in its mother's pouch.

1 Some animals carry their babies in pouches.

2 Mother kangaroos have pouches.

3 Baby kangaroos cannot look after themselves.

4 When kangaroos are born, they don't have any fur.

5 The baby kangaroo needs to be kept safe and warm.

6 It is safe and warm inside the mother kangaroo's pouch.

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Exercise 4.6 Topic of conversation – key topic sentence clues

Recipient

Instructions
Read the clue sentences written below. Then listen to the group of sentences the clinician reads to you. As each sentence is read, try to repeat back as much as you can. Do not be afraid to guess.

Please ask the clinician to repeat or clarify the sentence if necessary.

Sentence clues

A Oak trees lose their leaves every year.

B While it is young, the baby kangaroo is kept safe and warm in its mother's pouch.

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Exercise 4.7 Topic of conversation – unrelated sentences with clue words (set A)

Clinician

Instructions

1 Explain to the recipient that they should use the clue word to help them repeat the sentence, but that the clue word does not appear in the sentence.
2 Say the clue word to the recipient with visual cues, or provide the recipient with a written list of all the clue words (see next page).
3 Say the sentence slowly, but with normal intonation and expression.
4 Ask the recipient to repeat the sentence.
5 Encourage the recipient to guess, and give feedback about any correct words.
6 If the recipient is having difficulty, give one or two key words from the sentence with visual cues, and try again.

	Clue word	Sentence
A	Greeting	How are you?
B	Storm	The weather is sometimes hard to predict.
C	Books	Reading is a pleasant pastime.
D	Fruit	Apples are good for you.
E	Shop	Prices are high these days.
F	Meal	The table has to be set for breakfast.
G	Bed	When I am tired, I go to sleep.
H	Jewellery	Are diamonds very expensive?

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Exercise 4.7 Topic of conversation – unrelated sentences with clue words (set A)

Instructions
The clinician will say a sentence. Please try to repeat what they have said. The clue word may help.

Clue word

A Greeting

B Storm

C Books

D Fruit

E Shop

F Meal

G Bed

H Jewellery

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Exercise 4.8 Topic of conversation – unrelated sentences with clue words (set B)

Clinician

Instructions

1 Explain to the recipient that they should use the clue word to help them repeat the sentence, but that the clue word does not appear in the sentence.
2 Say the clue word to the recipient with visual cues, or provide the recipient with a written list of all the clue words (see next page).
3 Say the sentence slowly, but with normal intonation and expression.
4 Ask the recipient to repeat the sentence.
5 Encourage the recipient to guess, and give feedback about any correct words.
6 If the recipient is having difficulty, give one or two key words from the sentence with visual cues, and try again.

	Clue word	Sentence
A	Music	She plays the piano and the violin.
B	Weather	There was a thunderstorm last week.
C	Bird	There was a nest in the tree.
D	Food	You should eat a big breakfast.
E	Sport	Do you play tennis?
F	Pet	Dogs are always faithful.
G	Water	The lake was very warm.
H	Teacher	Boys and girls must go to school.
I	Scenery	Tall buildings often ruin beautiful places.
J	Clock	You can tell the time by looking at a wristwatch.

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Exercise 4.8 Topic of conversation – unrelated sentences with clue words (set B)

Instructions
Here is a list of clue words.

The clinician will say a sentence. Please try to repeat what they have said. The clue word may help.

Clue word

A Music

B Weather

C Bird

D Food

E Sport

F Pet

G Water

H Teacher

I Scenery

J Clock

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Exercise 4.9 Topic of conversation – unrelated sentences with clue words (set C)

Clinician

Instructions

1 Explain to the recipient that they should use the clue word to help them repeat the sentence, but that the clue word does not appear in the sentence.
2 Say the clue word to the recipient with visual cues, or provide the recipient with a written list of all the clue words (see next page).
3 Say the sentence slowly, but with normal intonation and expression.
4 Ask the recipient to repeat the sentence.
5 Encourage the recipient to guess, and give feedback about any correct words.
6 If the recipient is having difficulty, give one or two key words from the sentence with visual cues, and try again.

	Clue word	Sentence
A	Bird	There was a nest in the tree.
B	Health	Everyone should see the doctor for a check-up.
C	Trees	The park is big and shady and a good place to have a picnic.
D	Car	We like to go for a drive in the mountains.
E	Cow	There are many animals on the farm.
F	Original	This recipe was handed down to me but I don't know who wrote it.
G	Early	It's best to be on time for an appointment.
H	Accident	A bus went off the road.
I	Fire	We threw water on the burning logs.

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Exercise 4.9 Topic of conversation – unrelated sentences with clue words (set C)

Recipient

Instructions
Here is a list of clue words.

The clinician will say a sentence. Please try to repeat what they have said. The clue word may help.

Clue word

A Bird

B Health

C Trees

D Car

E Cow

F Original

G Early

H Accident

I Fire

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Exercise 4.10 Topic of conversation – unrelated sentences with clue words (set D)

Clinician

Instructions

1 Explain to the recipient that they should use the clue word to help them repeat the sentence, but that the clue word does not appear in the sentence.
2 Say the clue word to the recipient with visual cues, or provide the recipient with a written list of all the clue words (see next page).
3 Say the sentence slowly, but with normal intonation and expression.
4 Ask the recipient to repeat the sentence.
5 Encourage the recipient to guess, and give feedback about any correct words.
6 If the recipient is having difficulty, give one or two key words from the sentence with visual cues, and try again.

	Clue word	Sentence
A	Paint	My favourite colour is yellow.
B	Inflation	The price of food is always rising.
C	Exercise	You must bend your knees when you lift heavy weights.
D	Church	All the bells ring on Sunday.
E	Food	I like to eat lots of fresh fruit.
F	Flies	When on a picnic, keep all food well covered.
G	Wash	Many people prefer a shower to a bath.
H	Game	Bridge and poker are played with cards.
I	Toys	Boys and girls have bikes and skates.
J	Mailbox	Receiving letters is more fun than writing them.

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Exercise 4.10 Topic of conversation – unrelated sentences with clue words (set D)

Recipient

Instructions
Here is a list of clue words.

The clinician will say a sentence. Please try to repeat what they have said. The clue word may help.

Clue word

A Paint

B Inflation

C Exercise

D Church

E Food

F Flies

G Wash

H Game

I Toys

J Mailbox

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Exercise 5.0 Context cues – contextually cued sentences

Clinician

Instructions
The following exercise consists of colloquial and often-spoken sentences. These should be familiar to the post-linguistically deafened recipient and may also be taught to peri- and pre-linguistically deafened individuals.

If this task is too difficult, the sentences can be adapted to be closed-set. Every effort, however, should be made to allow open-set perception.

1 Give the recipient the clue for a set of sentences.
2 Explain that the task is to repeat the sentence.
3 Say the sentence slowly with normal intonation.
4 Confirm any words that were repeated correctly.
5 Repeat each sentence a maximum of three times. If, after three presentations, the sentence was not repeated correctly, provide the recipient with a key word or words from the sentence, and try again.
6 When it is necessary to present the sentence using visual cues, allow the recipient to listen again to the sentence in the auditory-only condition.

Set A

Clue: Questions about you

Sentence
1 What's your name?
2 How old are you?
3 Are you married or single?
4 How many children do you have?

Clue: Questions about your home

Sentence
1 Where do you live?
2 Do you live in a house or an apartment?
3 Do you have a big garden?

Clue: Questions about things that you like

Sentence
1 Do you like watching television?
2 What's your favourite colour?
3 Would you like a cup of tea or coffee?

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Set B

Clue: Dinner table phrases

Sentence

1 Dinner smells wonderful.
2 Pass the salt and pepper, please.
3 Would you like some more?
4 What's for dessert?

Clue: Early morning phrases

Sentence

1 Good morning.
2 Did you sleep well?
3 What would you like for breakfast?

Clue: Late evening phrases

Sentence

1 I'm tired; what time is it?
2 It's late; I think I'll go to bed.
3 Good night, see you in the morning.

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Exercise 5.1 Context cues – common sentences

Clinician

Instructions

1 Give the recipient the clue for a set of sentences.
2 Explain that their task is to repeat the sentence.
3 Say the sentence slowly, with normal intonation.
4 Confirm any words that were repeated correctly.
5 Repeat the sentences a maximum of three times. If, after three presentations, the sentence was not repeated correctly, give the recipient a key word or words from the sentence and try again.
6 When it is necessary to present the sentence using visual cues, allow the recipient to listen again to the sentence in the auditory-only condition.

Set A

Clue: Common sentences used everyday

Sentence

1 Hello, (recipient's name).
2 How are you?
3 I'm very well, thank you.
4 What time is it?
5 What did you say?
6 Good (night/afternoon/morning/evening).
7 It's (hot/cold/raining) outside today.
8 The time is (#) o'clock.
9 The time is half-past (#).
10 The time is quarter past/to (#).

Set B

Clue: Common sentences used everyday

Sentence

1 How much is that?
2 Would you like a cup of (tea/coffee)?
3 When is your (birthday/anniversary)?
4 How many (children/brothers/sisters) do you have?
5 Do you drive a car?
6 How was the traffic today?
7 I am leaving now.
8 I am going home.
9 What would you like for lunch?
10 Where are you going?

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Exercise 5.2 Context cues – common situations[52]

Clinician

Instructions
This exercise consists of sentences related to common situations. The recipient should be familiarised with the situation using both visual and auditory cues.

The sentences should be presented initially without the use of visual cues. Providing a key word from the sentence will adapt the exercise to a slightly lower performance level. However, allow ample opportunity for open-set perception.

1 Explain the task.
2 Give the recipient the clue for a set of sentences.
3 Present the sentences slowly with normal intonation, confirming any correctly repeated words after each presentation.
4 Encourage the recipient to use strategies to confirm or clarify the sentence, such as:

- 'Repeat.'
- 'Did you say ....?'
- Can you say it a different way?'

5 If, after three presentations, the recipient has not understood the sentence, provide a key word from the sentence using visual cues.
6 When it is necessary to present the sentence using visual cues, allow the recipient to listen again to the sentence in the hearing-only condition.

Set A

Clue: At the bank

Sentence

1 Do you have an account at this branch?
2 Would you like to open a new account?
3 The teller at window number one will help you.
4 Is this a deposit or a withdrawal?
5 You forgot to sign this cheque.
6 This cheque has not been cleared.
7 Would you like to order a statement?
8 Your account is overdrawn.

[52] Plant, 1984, Commtram, NAL, Australia.

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Set B

Clue: At a restaurant

Sentence

1 How would you like your steak cooked?
2 You have a choice of soup or salad.
3 Good evening. May I take your order?
4 Would you care to dine at this restaurant again?
5 Would you like to use a credit card, or pay cash?
6 Thank you. Do come again.
7 Would you like a table for two?
8 Is there anything else I can get for you?
9 You have potatoes on your chin.
10 Would you like pie, cake, or ice-cream for dessert?

Set C

Clue: At bedtime

Sentence

1 It's time for bed.
2 Are you sleepy?
3 Your bath is ready.
4 Have you brushed your teeth?
5 Sleep well!
6 Shall I close the door?
7 Shall I turn off the light?
8 Would you like a drink of water?
9 Sweet dreams!
10 Good night. See you in the morning!

Set D

Clue: Going to the beach

Sentence

1 This sand is hot.
2 The sun is bright.
3 Do you want to swim now?
4 Here is your beach towel.
5 I think I am sunburnt.
6 Who is thirsty?
7 The waves are very big today.

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8 My swimming costume is wet.
9 The beach is packed with people.
10 Please hand me my beach bag.

Set E

Clue: At the bus stop

Sentence

1 Hello, how are you?
2 Do you have a match?
3 I think the bus is late again.
4 Watch out for that puddle.
5 The buses are never on time.
6 Does this bus go into the city?
7 Here comes the bus.
8 What time does the bus leave?
9 Did I miss the bus to the university?
10 Are you saving this seat?

Set F

Clue: At the doctor's office

Sentence

1 Well, what seems to be the problem?
2 Let me look at your tongue.
3 I'll give you some medicine.
4 How long have you been sick?
5 Does that hurt?
6 The doctor will see you now.
7 How's your family?
8 Take a deep breath.
9 See the receptionist for another appointment.
10 Take two capsules before each meal.

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Exercise 6.0 Information transfer – complete the grid[53]

Clinician

Instructions

1 Give the recipient a photocopy of the grid on page 138, which is blank apart from the shaded square number 6. A larger version of this grid can be photocopied from Appendix 2.

2 Explain to the recipient that you have a similar grid but yours contains pictures and words. The task is for the recipient to create an identical copy of your grid by following your instructions. Explain that they will be writing or drawing in 15 of the blank squares.

3 Before you begin the exercise, photocopy the partially completed grid on the next page (which you can photocopy more easily from Appendix 2), and then prepare it as follows:

- in square 7, write today's date
- In square 12, write which year it is
- in square 13, write which day it was yesterday
- in square 16, write your name
- in square 17, write the number 10
- in square 19, write the recipient's eye colour
- in square 20, write the recipient's name

4 Give the recipient the following instructions without visual cues, explaining what they should write or draw in their grid:

A Start in the black square. Go up one square. Draw a picture of the sun in this square.
B Go right two squares. Draw a picture of a house in this square.
C Go down two squares. In this square write which day it was yesterday.
D Go left two squares, then down one square. In this square write my name.
E Go back to the square with the drawing of the sun. Go right three squares. In this square draw a triangle.
F Go down two squares. Draw a picture of a cup in this square.
G Go left two squares, then up one square. In this square write today's date.
H In the square above this picture draw picture of a horse.
I Go back to the square with the drawing of a cup. In the square below this write the colour of your eyes.
J Go left three squares, then up one square. In this square draw a picture of a tree.
K Go the square below the drawing of the house. In this square draw a large cross.
L Go right two squares. In this square draw a large circle.
M Go down two squares. In this square write your name.

[53] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.

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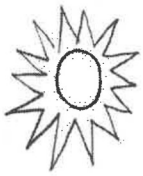
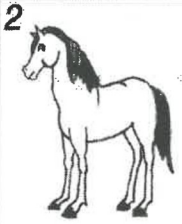
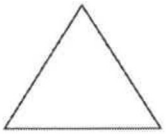
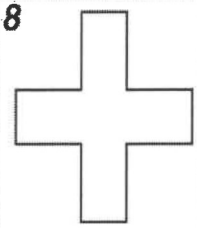
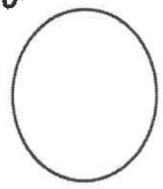
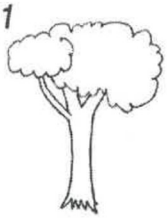
N Go left three squares. Multiply two by five and write your answer in this square.

O Finally, write in the square to the right of the drawing of the tree, what year it is now.

5 Encourage the recipient to seek clarification when they are unsure.
6 Give the recipient feedback.
7 At the end of the exercise compare the two grids, and discuss ways in which any errors were or may have been resolved.

The grid should look like this. (This grid can be easily photocopied from Appendix 2.)

1 	2 	3	4 	5
	7 Date:	8 	9	10 
11 	12 Year:	13 Yesterday:	14	15
16 Name:	17 10	18	19 Eye colour:	20 Name:

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Exercise 6.0 Information transfer – complete the grid[54]

Recipient

Instructions

1 Here is a rectangle which contains 20 squares. You are going to write or draw something in 15 of them.

2 Listen carefully to the instructions, which will be given one at a time. If you are not sure, ask for clarification using any of the following strategies:

- 'Please repeat'
- 'Did you say ....?'
- 'I heard ...., is that right?'

3 When you have finished, compare your grid with your clinician's grid.

1	**2**	**3**	**4**	**5**
6	**7**	**8**	**9**	**10**
11	**12**	**13**	**14**	**15**
16	**17**	**18**	**19**	**20**

[54] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.

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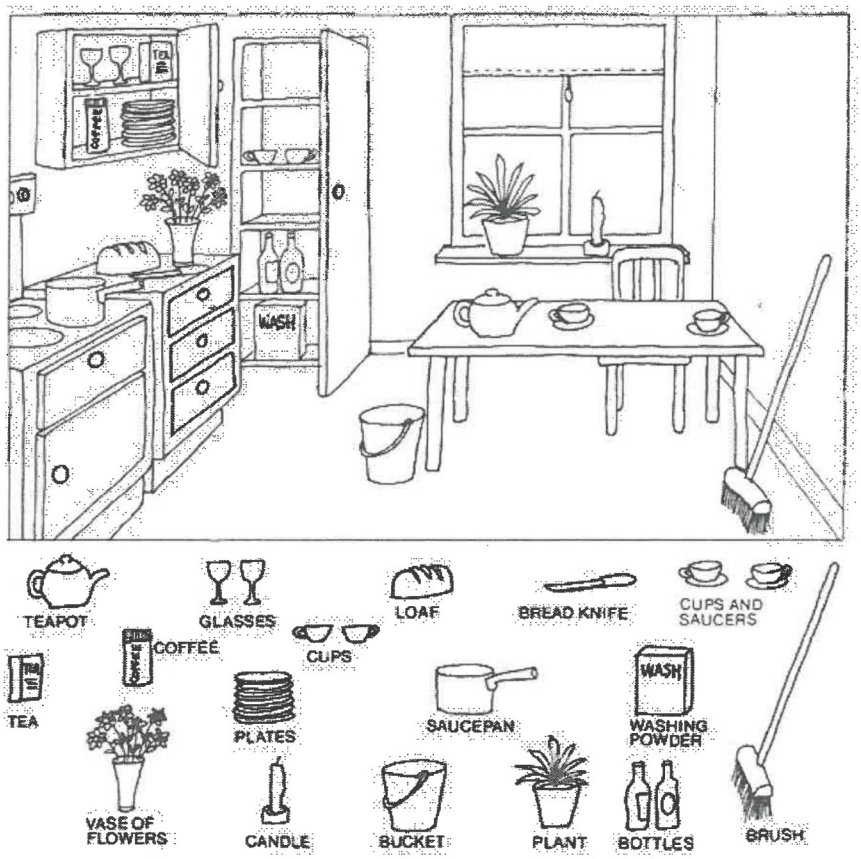
Exercise 6.1 Information transfer – complete the drawing[55]

Clinician

Instructions

1 Give the recipient their copy of the drawing (on the next page). This drawing can be more easily photocopied from Appendix 2.
2 Explain to the recipient, in the auditory-only condition, that the objective is to draw the items in the correct place. (Your copy of the drawing below, which you can also photocopy from Appendix 2, already has all the items drawn in.)
3 Give the recipient instructions one at a time in the form of the item to be drawn and where to draw it, for example, 'Draw the teapot on the left-hand side of the table'.
4 Encourage the recipient to seek clarification, when required. However the recipient must not see your copy of the picture.
5 To adapt the exercise to a higher performance level, provide instructions with multiple components, for example, 'Draw the candle and the plant on the window ledge, with the candle on the right-hand side'.
6 Provide feedback as required.



[55] Watcyn-Jones, 1997. Reproduced by permission of Penguin Books Ltd.

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Exercise 6.1 Information transfer – complete the drawing[56]

Recipient

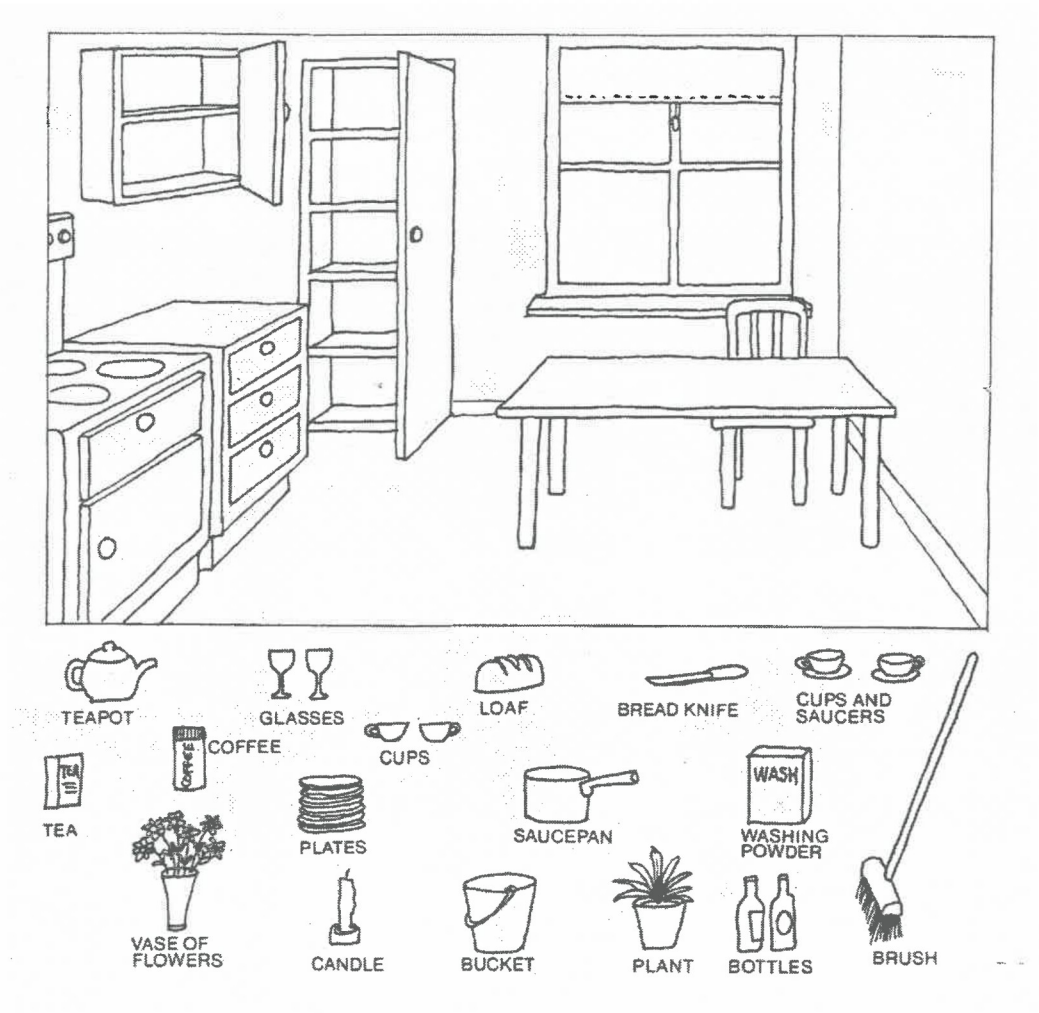
Instructions

1 Below is a drawing of a kitchen. Your clinician is going to help you to draw a number of items on the picture by telling you what to draw and where to draw it. (The items to be drawn are shown below the picture).

2 Listen carefully and then draw the item on the picture. If you are unsure, use one of the following strategies for clarification, but do not look at the clinician's drawing:

- Ask the clinician to repeat the whole instruction.
- Repeat back what you think the instruction was, for example, 'did you say ....?' Your clinician will provide feedback as to which parts you heard correctly.
- Ask your clinician to clarify any parts you are not sure of, for example, 'I heard you say "'saucepan" but I am not sure where to draw it'.

3 When you have finished, compare your drawing to the clinician's.



[56] Watcyn-Jones, 1997. Reproduced by permission of Penguin Books Ltd.

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Exercise 6.2 Information transfer – describe, perceive and draw[57]

Clinician

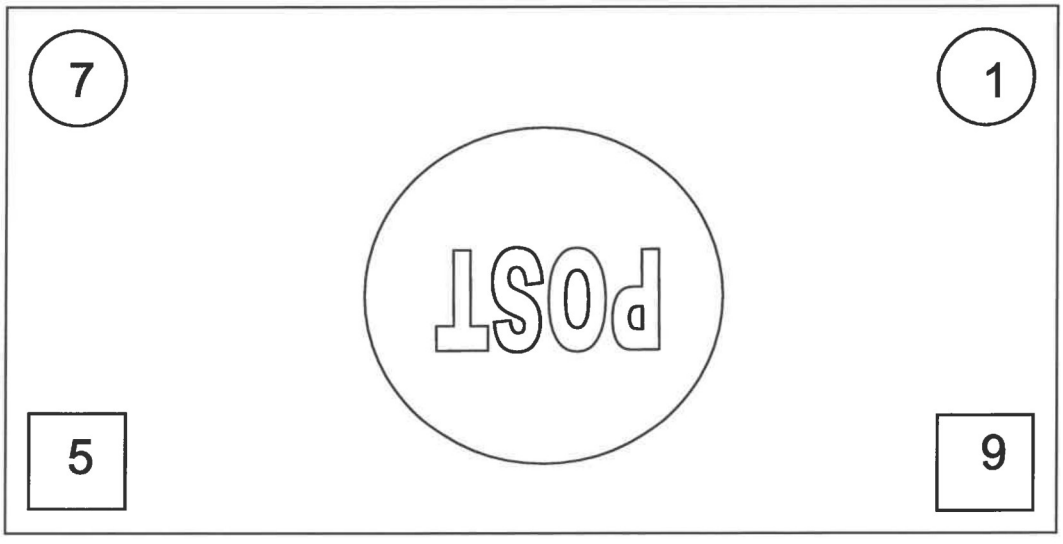
Instructions

1 Give the recipient a set of verbal instructions to draw or write objects and symbols on a blank rectangle, to form a pattern (see examples below).
2 Explain to the recipient that the task is to listen to and carry out the instructions, using clarification strategies whenever they are unsure of any details.
3 Provide the recipient with blank rectangles, and a pen or pencil.
4 Once they have completed the exercise, show them the correct pattern and discuss any errors.

Both your and the recipient's copies of this exercise can be photocopied from Appendix 2.

The following presentation tips may be useful:[58]

- Recipients who find open-set listening tasks challenging may need to perform this task with lip reading, initially.
- Adapt the language to suit the recipient.
- Use a number of short sentences initially, building up to longer, more detailed strings of instructions when the recipient is achieving the task.
- If the recipient is reluctant to ask for clarification, encourage them to repeat or paraphrase each instruction to ensure it has been correctly perceived.
- Confirm those instructions that have been correctly understood.
- Do not automatically repeat the instruction if the recipient hesitates – wait for them to question details so they begin to take responsibility for repairing the communication breakdown.



[57] Plant, 1991, Syntrex, NAL, Australia.
[58] Adapted from Plant, 1991, Syntrex, NAL, Australia.

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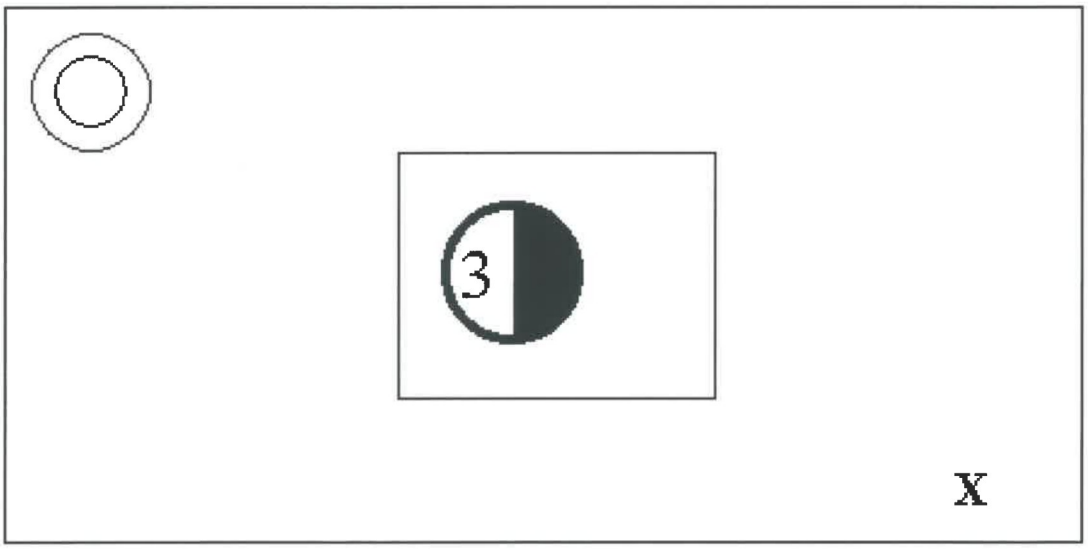

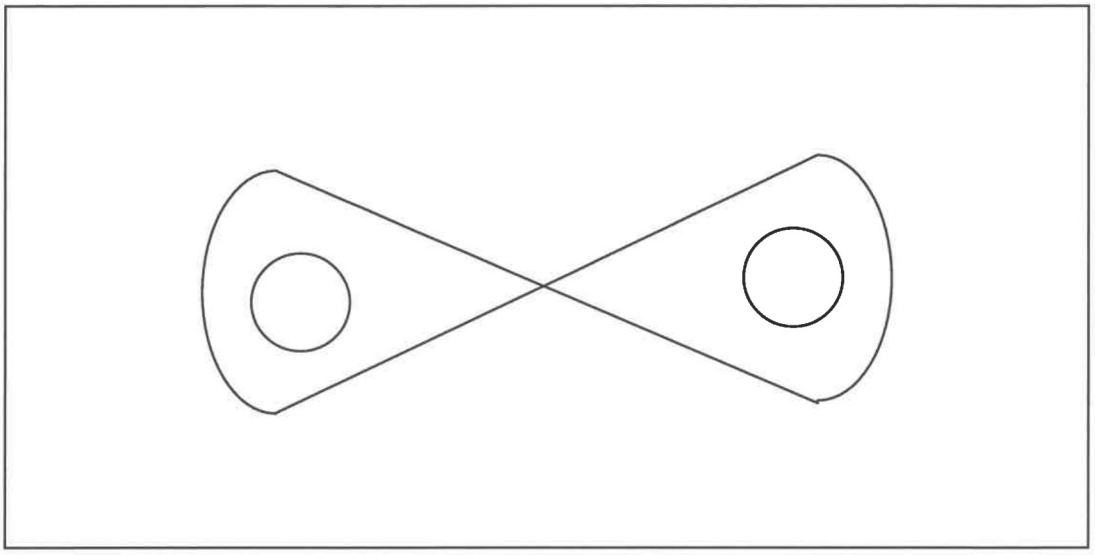

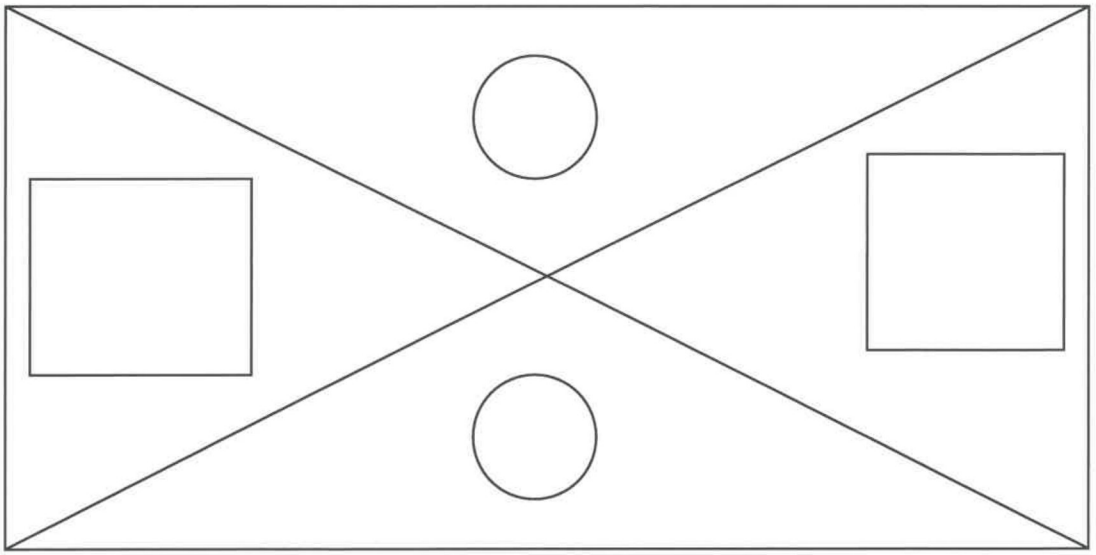

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Exercise 6.2 Information transfer – describe, perceive and draw[59]

Recipient

Instructions

1 Below is an empty box. Your clinician is going to help you to draw a pattern of objects and symbols in the box by telling you what to draw and where to draw it. Listen carefully and then draw the items in the box.

2 If you are not sure, use one of the following strategies for clarification but do not look at the clinician's drawing:

- Ask the clinician to repeat the whole instruction
- Repeat back what you think the instruction was, for example, 'did you say the top left hand corner?' Your clinician will provide feedback as to which parts you heard correctly.
- Ask your clinician to clarify any parts you are not sure of, for example, 'I heard you say "circle" but I am not sure where to draw it'.

When you have finished, compare your drawing to the clinician's.

[59] Plant, 1991, Syntrex, NAL, Australia.

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Exercise 6.3 Information transfer – complete the missing information[60]

Clinician

Instructions

1 Give the recipient their copy of the exercise (see next page). Your copy is reproduced below. Both your and the recipient's copies can also be photocopied from Appendix 2.
2 Explain that you and the recipient both have the same table, but that you each have different and complementary missing details. The task is to fill in the missing information on both your sheets by taking it in turns to ask and answer questions. For example, you may ask the recipient: 'What street is the house on?' The recipient may ask you: 'Is the condition of the flat modern, quite modern or not very modern?'
3 When the recipient hesitates, encourage them to request clarification.

Detail	Flat	House
Street	King Street	
Size	big quite big small	big quite big ✓ small
Condition	modern ✓ quite modern not very modern	modern quite modern not very modern
Number of rooms	three	downstairs – upstairs –
List of rooms	a living room a kitchen a bedroom	
Central heating	Yes	
Near the shops		No
Distance from town centre	1 km	
Rent		$1600 a month
Any other information	You share the toilet and bathroom on the first floor.	

[60] Watcyn-Jones and Howard-Williams, 2001. Reproduced by permission of Penguin Books Ltd.

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Exercise 6.3 Information transfer – complete the missing information[61]

Recipient

Instructions
You have information about a flat and house in which some details are missing. Your task is to ask the clinician for this missing information, for example, 'What street is the flat on?'

The clinician also has missing information which you can supply, and will ask you questions, for example, 'Does the house have central heating?' You and the clinician will take it in turns to ask and answer questions.

Detail	Flat	House
Street		Park Road
Size	big ✓ quite big small	big quite big small
Condition	modern quite modern not very modern	modern quite modern not very modern ✓
Number of rooms	three	downstairs – two upstairs – three
List of rooms		a living room a kitchen two bedrooms a bathroom/toilet
Central heating		No
Near the shops	Yes	
Distance from town centre		2 kms
Rent	$250 a week	
Any other information		There is a large garden and a garage.

[61] Watcyn-Jones and Howard-Williams, 2001. Reproduced by permission of Penguin Books Ltd.

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Exercise 7.0 Open-set fill in the sentence[62]

Clinician

Instructions
Give the recipient their copy of the 20 incomplete sentences (see next page). Present the complete sentences one at a time without visual cues. Prompt the recipient to repeat the missing words or phrases.

1 Elephants cannot jump.
2 Queen Elizabeth I of England went completely bald at an early age.
3 Until 1957, it was illegal to go swimming in Wales on a Sunday.
4 Typewriters were first developed to help the blind.
5 For the first six or seven months of our lives, we can do something that we are never able to do again; swallow and breathe at the same time.
6 In order to be the last name in the local telephone directory, a Chicago man changed his name to Zeke Zzzypt.
7 Sir Winston Churchill was a well-known Shakespearean actor before he became a politician.
8 The yo-yo was originally a Filipino jungle weapon.
9 Goldfish will often turn white if left in a darkened room.
10 When Ian Fleming wrote his first James Bond book, his 007 hero was called Rupert de Vere.
11 King Louis XIV of France was the first person, male or female, to wear high heels.
12 The Germans used to keep frogs as live barometers because they croak when the pressure drops.
13 Indian ink actually comes from China.
14 To conserve metal, the Oscars given out in the Academy Awards during World War II were made of wood.
15 The word 'tip' is an abbreviation of 'to insure promptness'.
16 A form of golf was first invented by the Chinese nearly 2,000 years ago.
17 It is impossible to sneeze and keep your eyes open at the same time.
18 Bumping foreheads with a handshake is the traditional greeting in Tibet.
19 The corkscrew was first invented to pull out teeth.
20 When George I came to the throne of England he could not speak a word of English.

[62] Adapted from Watcyn-Jones and Howard-Williams, 2001

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Exercise 7.0 Open-set fill in the sentence[63]

Recipient

Instructions
Here is a list of incomplete sentences. Your clinician will read the complete sentences one at a time. Please try to repeat the missing word(s) or phrase. Try to guess if you are not sure.

1 Elephants cannot .....
2 Queen Elizabeth I of England ..... at an early age.
3 Until 1957 it was illegal ..... in Wales on a Sunday.
4 ..... were first developed to help the blind.
5 For the first six or seven months of our lives, we can do something that we are never able to do again; ..... at the same time.
6 In order to be the last name in the local telephone directory, a Chicago man ..... to Zeke Zzzypt.
7 Sir Winston Churchill was a ..... before he became a politician.
8 The yo-yo was originally a .....
9 Goldfish will often turn white if .....
10 When Ian Fleming wrote his first James Bond book, his 007 hero was called .....
11 King Louis XIV of France was the first person, male or female, to wear .....
12 The Germans used to keep frogs as live barometers because they .....
13 Indian ink actually comes from .....
14 To conserve metal, the ..... during World War II were made of wood.
15 The word 'tip' is an abbreviation of '.....'
16 ..... was first invented by the Chinese nearly 2,000 years ago.
17 It is impossible to ..... at the same time.
18 Bumping foreheads with a handshake is the traditional greeting .....
19 The corkscrew was first invented .....
20 When George I came to the throne of England he could not .....

[63] Adapted from Watcyn-Jones and Howard-Williams, 2001.

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Exercise 8.0 Single-scripted conversation[64]

Clinician

Instructions

1 Provide the recipient with the list of questions to which you will create answers (see recipient's copy on page 148).
2 Instruct the recipient to ask the questions, listen carefully to your reply and repeat your reply as accurately as possible.
3 Encourage the recipient to guess. If the recipient cannot correctly repeat the information, provide assistance as follows:

- Repeat the whole answer.
- Repeat the answer emphasising the incorrect part.
- Repeat only the incorrect part.
- Confirm the parts correctly repeated.

4 Adjust the predictability and complexity of your replies to suit the skill level of the recipient (for example, embed the answer, use proper nouns) so the exercise remains challenging but manageable.

A Questions about the place where you were born[65]

1 Are you from the city or the country?
2 How long did you live there?
3 Was it flat or hilly?
4 Did it have a market?
5 How many people lived there?
6 What was the weather like there?
7 Was there a church?
8 Were there many shops?
9 What were the houses made of?
10 How far did you live from the sea?
11 What kinds of public transport were available?
12 What kind of entertainment was there?
13 What did you like best about it?
14 What could you see when you looked from your bedroom window?
15 Was there any special feature?

[64] Courtesy of Queensland Cochlear Implant Centre and National Acoustic Laboratories.
[65] Based on Erber, 1988.

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B Questions about you

1 What's your surname?
2 What are your Christian names?
3 How old are you?
4 What's your date of birth?
5 Where were you born?
6 Are you married or single?
7 When were you married?
8 What's your job?
9 How much do you weigh?
10 How tall are you?
11 What's the colour of your eyes?
12 What's your doctor's name?

C Questions about relatives

1 What is your father's Christian name?
2 What was your mother's maiden name?
3 How many brothers do you have?
4 How many sisters do you have?
5 How many children do you have?

D Questions about your home

1 Which suburb do you live in?
2 What's the name of your street?
3 Do you live in a house or a flat?
4 What's the number of your house?
5 What's your telephone number?
6 How many bedrooms does your house have?
7 Do you have a gas or an electric stove?
8 Where do you go shopping?
9 How do you get to the shops?
10 Do you have milk delivered?

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Exercise 8.0 Single-scripted conversation[66]

Recipient

Instructions

Below is a list of questions which you can use to interview your clinician. Your clinician will create answers for each one. After each question, try to repeat back the answer as accurately as you can. Guess, and request clarification if you are not sure.

A. Questions about the place where you were born[67]

1 Are you from the city or the country?
2 How long did you live there?
3 Was it flat or hilly?
4 Did it have a market?
5 How many people lived there?
6 What was the weather like there?
7 Was there a church?
8 Were there many shops?
9 What were the houses made of?
10 How far did you live from the sea?
11 What kinds of public transport were available?
12 What kind of entertainment was there?
13 What did you like best about it?
14 What could you see when you looked from your bedroom window?
15 Was there any special feature?

B. Questions about you

1 What's your surname?
2 What are your Christian names?
3 How old are you?
4 What's your date of birth?
5 Where were you born?
6 Are you married or single?
7 When were you married?
8 What's your job?
9 How much do you weigh?

[66] Courtesy of Queensland Cochlear Implant Centre and NAL.
[67] Based on Erber, 1988.

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10 How tall are you?
11 What's the colour of your eyes?
12 What's your doctor's name?

C. Questions about relatives

1 What is your father's Christian name?
2 What was your mother's maiden name?
3 How many brothers do you have?
4 How many sisters do you have?
5 How many children do you have?

D. Questions about your home

1 Which suburb do you live in?
2 What's the name of your street?
3 Do you live in a house or a flat?
4 What's the number of your house?
5 What's your telephone number?
6 How many bedrooms does your house have?
7 Do you have a gas or an electric stove?
8 Where do you go shopping?
9 How do you get to the shops?
10 Do you have milk delivered?

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Exercise 9.0 Seeking information – role-play exercises[68]

Clinician

Instructions
In the following role-play exercises, the recipient is provided with basic information about the context and purpose of a conversation, and an introductory sentence. This exercise may be used in telephone training.

1 Explain to the recipient that you would like them to play the role of the person with a specific task (see suggestions below).
2 Using the suggested prompts below as a starting point, play the part of the conversation partner, asking the recipient the kind of questions that would occur in this situation. The recipient should answer the questions.
3 Encourage the recipient to use clarification strategies when they are unsure of the question.

Situation A Purchasing a train ticket at the ticket office

1 Where would you like to go?
2 When would you like to go?
3 What time of the day would you like to travel?
4 How many people will be travelling with you?
5 Would you like a one-way or a return ticket?
6 Will you be returning on the same day?
7 How would you like to pay for the ticket?

Situation B Obtaining a replacement cable for a speech processor

1 Was your speech processor fitted at this clinic?
2 What model is your speech processor?
3 Is your speech processor body-worn or behind the ear?
4 How long have you had this speech processor?
5 What length of cable would you like?
6 What colour would you prefer: beige, brown, grey or black?
7 Do you need any other spare parts?

Situation C Arranging the repair of a refrigerator.

1 When did the refrigerator break down?
2 How old is the refrigerator?
3 What is the make or manufacturer?
4 Is it still under warranty?
5 Has it broken down before?
6 Does it have a separate freezer?
7 We can come today at one o'clock – will someone be home?

[68] Reproduced courtesy Queensland Cochlear Implant Centre

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Exercise 9.0 Seeking information – role-play exercises[69]

Recipient

Instructions
In this exercise, you will pretend to be in a specific place where you have a specific task to achieve. Your clinician will ask you some questions which you should answer.

To begin playing your part, read about the situation you are in, then read out the introductory sentence. Your clinician will then ask you questions related to the situation.

Please ask the clinician to repeat the question if necessary, or use prompts such as 'did you say…?' or 'are you asking…?'

Situation A. Railway ticket office

Task: To obtain a train ticket for your journey home/to visit family.

Introductory sentence: 'I would like to buy a train ticket please.'

Situation B. The reception area at your implant clinic

Task: To obtain a replacement/spare cable for your speech processor.

Introductory sentence: 'I would like a new cable for my speech processor, please.'

Situation C. Your local electrical store

Task: To arrange for your broken refrigerator to be repaired.

Introductory sentence: 'My refrigerator isn't working. Please could you arrange to have it repaired?'

[69] Reproduced courtesy Queensland Cochlear Implant Centre.

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Exercise 9.1 Seeking information – wayout weekend role-play[70]

Clinician

Instructions
In the following role-play exercise, the recipient is provided with basic information about the context and purpose of a conversation, and an introductory sentence.

The recipient plays the part of someone phoning up to book a weekend course away, and you play the part of the booking agent. Both you and the recipient are trying to obtain specific information. The information is provided in the course flyer (for the clinician) or course advertisement (for the recipient).

1 Explain to the recipient that you would like them to play the role of the person booking a weekend course.
2 Using the suggested prompts below as a starting point, play the part of the conversation partner, asking the recipient the kind of questions that would occur in this situation. The recipient should answer the questions.
3 Encourage the recipient to use clarification strategies when they are unsure of the question.

Script:

Clinician: Good morning/afternoon. Wayout Weekend Courses.

Recipient: I'd like some information about one of your weekend courses.

Information you require from the recipient after they have selected a course (see course flyer next page).

Course name:

Date:

Recipient name:

Address:

Tel no:

Total cost:

[70] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.

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Wayout Weekend Courses: this month's courses.

Computer Programming

Dates:	2nd and 3rd
Days:	Fri-Sat
Information:	Computer programming course for complete beginners at Wilton College, Manchester. Learn how to write you own programs in Basic. One computer per person.
Course leader:	David Chip, Head of Computer Studies, Wilton College.
Maximum number:	15
Accommodation:	Central Hotel (5 minutes from the college)
Cost:	£190

Folk dancing

Dates:	23rd–25th
Days:	Fri–Sun
Information:	A weekend for people who love folk dancing. Practice old dances, learn new ones. All in the pleasant atmosphere of the Richmond Conference Centre on the Isle of Wight.
Course leader:	Rosemary Morris, author of *Traditional British Folk Dances*.
Maximum number:	40
Accommodation:	at the Centre
Cost:	£200

Self-hypnosis

Dates:	2nd–4th
Days:	Fri–Sun
Information:	Learn how to hypnotise yourself at Barnet Manor, Cambridge, under the direction of one of America's leading hypnotists. See how self-hypnosis can help you to relax, overcome fears, give up bad habits, etc.
Course leader:	Dr Henry Bond, author of the best-selling book, *Change Your Life Through Self-Hypnosis*.
Maximum number:	12
Accommodation:	at Barnet Manor
Cost:	£180

Ghost hunting

Dates:	16th–18th
Days:	Fri–Sun
Information:	A weekend for those who like something different at London House, Yorkshire. Lectures and talks by various experts on ghosts. The course includes spending the night at a 'haunted house'. Not recommended for people with weak hearts.
Couse leader:	Dr Roger Spook, author of *Haunted Houses in Britain.*
Maximum number:	15
Accommodation:	at London House.
Cost:	£175

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Watercolour painting	
Dates:	23rd–25th
Day:	Fri–Sun
Information:	Learn how to paint in watercolours among the lakes and mountains of the Lake District. Paints and other materials supplied.
Course leader:	Amanda Turner, painter and art teacher.
Maximum number:	12
Accommodation:	Lake View Hotel, Penrith
Cost:	£250
Pottery	
Dates:	16th, 17th
Days:	Fri-Sat
Information:	Pottery weekend for beginners at the Gilbert School of Art in Bristol. You will learn how to make pots both by hand and on a wheel. All materials supplied.
Course leader:	Margaret Clay, pottery teacher at the Gilbert School of Art.
Maximum number:	15
Accommodation:	Station Hotel (10 minutes from the school).
Cost:	£185
Weaving	
Dates:	27th and 28th
Days:	Sat–Sun
Information:	Weaving couse for absolute beginners at Glebe House, Brighton. One loom per person.
Course leader:	Pamela Dobson, teacher.
Maximum number:	10
Accommodation:	at Glebe House.
Cost:	£165
Bird watching	
Dates:	9th and 10th
Days:	Fri-Sat
Information:	Spend the weekend bird-watching (mainly sea birds) in West Wales. Cameras and binoculars may be hired for £10 a day.
Course leader:	David Atkins, author of several books on bird-watching.
Maximum number:	12
Accommodation:	Grand Hotel, Tenby
Cost:	£180

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Exercise 9.1 Seeking information – wayout weekend role-play[71]

Recipient

Instructions

In the following role-play exercise, you are phoning up to book a weekend course away. Some information is provided in the course flyer advertisement below.

1 Using the suggested prompts below as a starting point, play the part of the person booking the weekend course, asking your clinician the kind of questions that would occur in this situation.
2 The clinician will answer the questions. Please use clarification strategies, including spelling out a word, when you are unsure of what the clinician has said.

Advertisement – Wayout Weekend

Looking for something different this weekend? Then try one of our popular weekend courses.

Courses this month are:

- Computer Programming
- Watercolour Painting
- Bird-watching
- Pottery
- Folk Dancing
- Weaving
- Self-hypnosis
- Ghost Hunting

Decide which course you are interested in and have a pen handy.

Script:

Clinician: Good morning/afternoon. Wayout Weekend Courses.

You: I'd like some information about one of your weekend courses

Following is the information you need to obtain:

Where the course is being held:

Date:

Number of days:

Course leader:

Where you will stay:

Number of people on the course:

Cost:

Any other information:

[71] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.

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Exercise 9.2 Seeking information – wayout weekend role-play (Australia and England)[72]

Clinician

Instructions
In the following role-play exercise, the recipient is provided with basic information about the context and purpose of a conversation, and an introductory sentence.

The recipient plays the part of someone phoning up to book a weekend course away, and you play the part of the booking agent. Both you and the recipient are trying to obtain specific information. The information is provided in the course flyer (for the clinician) or course advertisement (for the recipient).

1 Explain to the recipient that you would like them to play the role of the person booking a weekend course.
2 Using the suggested prompts below as a starting point, play the part of the conversation partner, asking the recipient the kind of questions that would occur in this situation. The recipient should answer the questions.
3 Encourage the recipient to use clarification strategies when they are unsure of the question.

Script:
Clinician: Good morning/afternoon. Wayout Weekend Courses.

Recipient: I'd like some information about one of your weekend courses.

Information you require from the recipient after they have selected a course (see course flyer next page).

Course name:

Date:

Recipient name:

Address:

Tel no:

Total cost:

[72] Adapted from Watcyn-Jones, 1984

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Wayout Weekend Courses: this month's courses in England and Australia.[73]

England

Computer Programming

Dates:	2nd and 3rd
Days:	Fri-Sat
Information:	Computer programming course for complete beginners at Wilton College, Manchester. Learn how to write you own programs in Basic. One computer per person.
Course leader:	David Chip, Head of Computer Studies, Wilton College.
Maximum number:	15
Accommodation:	Central Hotel (5 minutes from the college)
Cost:	£190 ($Aus 400)

Folk dancing

Dates:	23rd–25th
Days:	Fri–Sun
Information:	A weekend for people who love folk dancing. Practice old dances, learn new ones. All in the pleasant atmosphere of the Richmond Conference Centre on the Isle of Wight.
Course leader:	Rosemary Morris, author of *Traditional British Folk Dances*.
Maximum number:	40
Accommodation:	at the Centre
Cost:	£200 ($Aus 410)

Self-hypnosis

Dates:	2nd–4th
Days:	Fri–Sun
Information:	Learn how to hypnotise yourself at Barnet Manor, Cambridge, under the direction of a leading American hypnotist. See how self-hypnosis can help you to relax, overcome fears, etc.
Course leader:	Dr Henry Bond, author of the best-selling book, *Change Your Life Through Self-Hypnosis.*
Maximum number:	12
Accommodation:	at Barnet Manor
Cost:	£180 ($Aus 380)

Ghost hunting

Dates:	16th–18th
Days:	Fri–Sun
Information:	A weekend for those who like something different at London House, Yorkshire. Lectures and talks by various experts on ghosts. The course includes spending the night at a 'haunted house'. Not recommended for people with weak hearts.
Course leader:	Dr Roger Spook, author of *Haunted Houses in Britain.*
Maximum number:	15
Accommodation:	at London House.
Cost:	£175 ($Aus 370)

[73] Adapted from Watcyn-Jones, 1984.

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Australia

Watercolour painting

Dates:	23rd–25th
Day:	Fri–Sun
Information:	Learn how to paint in watercolours among the lakes and mountains of NSW's Kosciuszko National Park. Paints and other materials supplied.
Course leader:	Amanda Turner, painter and art teacher.
Maximum number:	12
Accommodation:	Lake View Hotel, Jindabyne
Cost:	$Aus 510 (£250)

Pottery

Dates:	16th, 17th
Days:	Fri-Sat
Information:	Pottery weekend for beginners at the Gilbert School of Art in Melbourne. You will learn how to make pots both by hand and on a wheel. All materials supplied.
Course leader:	Margaret Clay, pottery teacher at the Gilbert School of Art.
Maximum number:	15
Accommodation:	Station Hotel (10 minutes from the school)
Cost:	$Aus 380 (£185)

Weaving

Dates:	27th and 28th
Days:	Sat–Sun
Information:	Weaving couse for absolute beginners at Glebe House, Brisbane. One loom per person.
Course leader:	Pamela Dobson, teacher.
Maximum number:	10
Accommodation:	at Glebe House
Cost:	$Aus 340 (£165)

Bird watching

Dates:	9th and 10th
Days:	Fri-Sat
Information:	Spend the weekend bird-watching in Blue Mountains National Park, near Sydney. Cameras and binoculars may be hired for $Aus 20 (£10) a day.
Course leader:	David Atkins, author of several books on bird-watching.
Maximum number:	12
Accommodation:	Grand Hotel, Katoomba
Cost:	$Aus 380 (£180)

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Exercise 9.2 Seeking information – wayout weekend role-play (Australia and England)[74]

Recipient

Instructions
In the following role-play exercise, you are phoning up to book a weekend course away. Some information is provided in the course flyer advertisement below.

1 Using the suggested prompts below as a starting point, play the part of the person booking the weekend course, asking your clinician the kind of questions that would occur in this situation.
2 The clinician will answer the questions. Please use clarification strategies, including spelling out a word, when you are unsure of what the clinician has said.

Advertisement – Wayout Weekend Courses in Australia and England

Looking for something different? Try one of our popular weekend courses.

Courses this month are:

- Computer Programming (England)
- Watercolour Painting (Australia)
- Bird-watching (Australia)
- Pottery (Australia)
- Folk Dancing (England)
- Weaving (Australia)
- Self-hypnosis (England)
- Ghost Hunting (England)

Decide which course you are interested in and have a pen handy.

Script:
Clinician: Good morning/afternoon. Wayout Weekend Courses.

You: I'd like some information about one of your weekend courses

Following is the information you need to obtain:
Where the course is being held:

Date:

Number of days:

Course leader:

Where you will stay:

Number of people on the course:

Cost ($Aus or £):

Any other information:

[74] Adapted from Watcyn-Jones, 1984

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Exercise 10.0 Open-set sentences – no clue words

Clinician

Instructions

1 Explain to the recipient that the task is to repeat the sentence.
2 Speak the sentences slowly, but with natural intonation and rhythm, confirming any correctly repeated words.
3 Repeat the sentences two more times if required. If the recipient is having difficulty, consider using the following adaptations to increase the success rate and maintain motivation:

- Provide the related topic with visual cues.
- Provide a context cue.
- Provide a key word clue.

4 If it is necessary to present the sentence using visual cues, allow the recipient to listen again to the sentence in the auditory-only condition.

Set A

	Sentence	No. of words
1	I put my money in the bank.	7
2	He's sick, so call the doctor.	6
3	They fought like cats and dogs.	7
4	We ate lunch at 12 o'clock.	6
5	Put your shoes on your feet.	6
6	Sit down in that chair.	5
7	If you're sleepy, go to bed.	6
8	Yellow and blue make green.	5
9	Put icing on the cake.	5
10	Birds fly high in the sky.	6

Set B

	Sentence	No. of words
1	Teenagers love to talk on the telephone.	7
2	He drove the car into the garage.	7
3	I don't have enough money to buy that.	8
4	The kitchen needs a table and some chairs.	8
5	Wear a hat and coat when it's cold.	8

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Set C

	Sentence	No. of words
1	The rain kept falling all day.	6
2	He drove away in his car.	6
3	They packed up their clothes in a suitcase.	8
4	It will be a long time before I am ready.	10
5	I read an interesting book last week.	7
6	Let's go to the beach this summer.	7
7	We planted a tree in the garden.	7
8	He put on his coat and hat as it was very cold.	12
9	We are going shopping at the supermarket.	7
10	She drank a glass of milk before going to bed.	10
11	My children make a lot of noise.	7
12	They borrowed some money from the bank to buy a car.	11
13	We had lunch at a restaurant yesterday.	7
14	She is going overseas next year.	6
15	It was still dark when I woke up this morning.	10

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Exercise 11.0 Easy interactive stories

Clinician

Instructions

This exercise provides a short paragraph on a common topic, followed by related questions. The topic is not provided to the recipient, as they must discern it from listening to the paragraph.

Read the paragraph to the recipient without visual cues, then ask them the questions about it.

The task can be adapted to a lower skill level by presenting the paragraph with visual cues, and presenting the questions in the auditory-only condition.

Set A. Breakfast

Breakfast is probably the most important meal of the day. It gives us energy to go through the morning. Most people eat breakfast at about seven o'clock in the morning. I like cereal, toast and juice for breakfast. On Sundays, it's nice to go out to a restaurant for breakfast.

Questions

1 What was I talking about?
2 What time do most people eat breakfast?
3 What time do you eat breakfast?
4 Do you like eggs for breakfast?
5 What do you like best for breakfast?
6 Do you ever go to a restaurant for breakfast?

Set B. Prices

Prices are going sky high. Everything is getting so expensive. Food costs more, clothes are more expensive, and the cost of housing is getting higher every year. The more money people make, the more prices go up.

Questions

1 What was I talking about?
2 What three things are more expensive?
3 Has your food bill gone up?
4 How much does a loaf of bread cost these days?
5 Do you think prices are too high?

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Set C. News

Some people say that television news has affected the sale of newspapers. By the time the newspapers are on the streets, the story has already been on T.V. But, there is usually not enough time on T.V. to report all the details of the news. A newspaper is better for that.

Questions

1 What was I talking about?
2 Do you prefer T.V. or a paper for the news?
3 Do you get the morning or afternoon paper?
4 What T.V. channel do you watch, for the news?
5 What is the name of your local newspaper?

Set D. Holidays

People work all year for a few weeks' holiday. They may go to the beach, go fishing, go to the mountains, or go to visit friends. Some people stay at home to relax. Regardless of what they do on holiday, people usually work hard at not working.

Questions

1 What was I talking about?
2 Where do people spend their holiday?
3 Do you go somewhere or do you stay at home?
4 Do you fly, drive or use some other means of transport?
5 How long do you usually have for a holiday?

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Exercise 11.1 Intermediate interactive stories[75]

Clinician

Instructions

Read the story out loud to the recipient. Then ask the questions that relate to each of the stories.

Story one. The disappointed cat.

One day, a little bird sat in a tree and looked around. He wanted something to eat and saw a piece of bread on the ground. He flew down and began to eat it. An old black cat saw the bird and crept up behind him. She almost caught him, but the little bird heard her and flew back into the tree. The cat was disappointed. She lay down on the steps and went to sleep. Then the little bird flew down again and ate the bread.

Questions

1 How big was the bird?
2 What did the bird see on the ground?
3 Did the cat catch the bird?
4 What colour was the cat?
5 Where did the cat fall asleep?
6 Did the bird get to eat the bread?

Story two. Roller skates.

Last summer, John asked his father for a pair of roller skates. John's father told him to save his money. He gave John a piggy bank for the coins he saved. For two months, John saved hard. When he opened his piggy bank, he only had ten dollars. He was very disappointed because he needed another twenty dollars. His father told him he would pay him twenty dollars if he did some jobs. John mowed the lawn, tidied up the garden and washed the car. He worked hard and when he had finished, his father gave him the money. John went to the shop next morning and bought some skates.

Questions

1 What did John want to buy?
2 How much money was in the piggy bank?
3 How much did his father say he would give John for doing some jobs?
4 Did John want the roller skates last spring or last summer?

[75] NSW Department of School Studies, 1990. Courtesy of the NSW Department of Education and Training.

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5 When did John go to the shop to buy the roller skates?
6 How did John feel when he realised he didn't have enough money?
7 What three jobs did John do for his father?

Story three. Jungle pictures.

Not long ago, some people went far into the jungle in Africa to take pictures of the wild animals that live there. They built a house and covered it with leaves and the branches of trees.

When it was finished, they waited patiently for the animals. They succeeded in taking many very interesting photographs of giraffes, zebras, elephants, lions and a great hippopotamus.

Questions
1 Where was the jungle?
2 What did they do with the leaves and branches?
3 What did they do in the house?
4 Tell me what they didn't see – giraffes, flamingos or lions?
5 How many hippopotamuses did they see?
6 How long ago did they go into the jungle?

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Exercise 11.2 Advanced interactive stories

Clinician

Instructions

Read the story out loud to the recipient. Then ask the questions that relate to the story.

Story one: Bali

Bali is a beautiful tropical island. The villages in Bali have many festivals throughout the year. The people perform traditional puppet shows and dances. There are many temples around the island. The women work very hard in the rice paddies. There are monkeys in the jungles. The food there is very hot and spicy. Smoke bellows from the volcanoes. The views are fantastic. Bali is a fabulous place for a holiday.

Questions

1 What are three things you might see if you went to Bali?
2 What type of food might you find?
3 Imagine the scenery and describe it.

Story two: Stonehenge

Stonehenge is an ancient landmark near Salisbury, England. It is the remains of two large circles assembled from large 'blue stone' rocks. These stones were originally surrounded by ditches, probably for protection. A few arches, pillars and slabs are the ruins of what is now thought to have been a remarkably accurate measuring device for the cycles of the moon and sun. According to scientists, the stones were dragged and ferried from Prescelly Mountain, 250 miles from the site. Recent estimates date the construction to 2000–1800 B.C. At least 82 stones were transported by manpower alone. Each stone weighed tons and required about 800 men to pull it. It is thought to have taken decades to construct Stonehenge.

There are many theories as to the purpose of Stonehenge. It was certainly a site for religious ceremonies. Many years after Stonehenge was built, a religious group called 'druids' worshipped there. These people left artefacts that indicate they made human sacrifices by burning. Present day druids perform religious ceremonies at Stonehenge, but they concentrate on sun worship, without bloodshed.

Questions

1 Where is Stonehenge found?
2 How old is Stonehenge?
3 How was it built?
4 Where did the material come from?
5 What might Stonehenge have been used for?

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6 What did druids do at Stonehenge?
7 Who uses it today?

Story three: Garlic

The simple bulb of garlic as we know it is certainly nothing special. However, garlic has a long and fascinating past. The Babylonians and ancient Greeks called it the 'stinking rose' and believed it had peculiar powers. People rubbed it on their bodies, buried it with their dead, and wore it round their necks.

The Egyptians went so far as to pray to garlic. They maintained that it possessed the secret of physical strength. When garlic supplies ran short for the workers building the Great Pyramid, they reportedly went on strike. Big servings of garlic were also fed to soldiers for strength in battle and to athletes for better performance.

It was also believed that garlic had many therapeutic values. Remedies have been recorded for snakebite, measles, colds, and cholera, to name but a few. A more bizarre practice was to string it around the neck to repel vampires.

While garlic is certainly not a cure for all sickness, it is a powerful antiseptic. It has also been used with good results as a pesticide. At the present time, the real value of garlic is in cooking. For some time, though, it was frowned upon as something smelly that only people from the Mediterranean ate. This view is changing, and no chef, who takes pride in cooking, would be without it.

Since most people worry about bad breath, it should be remembered that this only occurs with raw garlic. It is perfectly safe to eat when cooked. A final reassurance comes from the Japanese, who are presently working on a strain of odourless garlic. This breakthrough should win over many who refrained from eating garlic previously because of fear of bad breath.

Questions

1 What was garlic called in the time of the Babylonians?
2 Name two ways that garlic was used in the past.
3 Why were soldiers and athletes fed so much garlic?
4 What were the garlic remedies supposed to cure?
5 What do we use garlic for in modern times?
6 What is the major shortcoming of garlic?
7 What is in the process of happening to garlic to make it better to eat?

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Exercise 12.0 Two-scripted conversation – shopping role-play[76]

Clinician

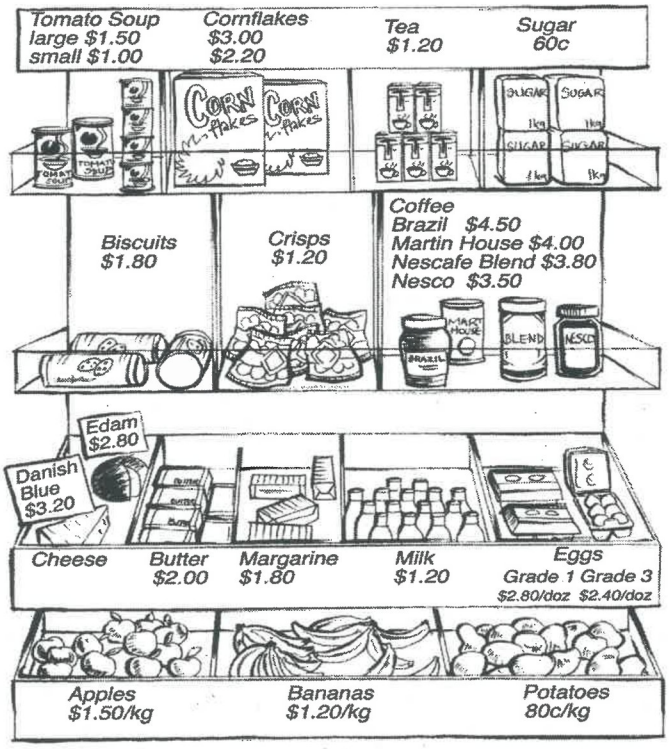
Instructions

In this exercise the recipient and the clinician each play different roles in a pre-scripted conversation. The recipient and clinician alternatively read from their scripts, listen to the other person's response and respond appropriately. The recipient plays the role of someone shopping and the clinician is the shopkeeper. The clinician has a picture of the goods for sale and the prices alongside the script as a starting point (see below).

The exercise may be used to highlight many of the skills acquired in the use of synthetic material including use of situational context, topic clues, prior context and limited choice questions as well as focusing on the message.

The clinician may choose to adapt the exercise to use local currency and weight units.

1 Give the recipient a shopping list and script (see pages 170–171).
2 While the conversation follows a set form, use your initiative to improvise, elaborate and increase the difficulty by inserting the relevant information into a longer or more complex sentence.
3 Encourage the recipient to request clarification if they are unsure of the meaning.



[76] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.

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Clinician's script

Clinician:	Good morning. How can I help you?
Recipient:	Good morning. I'd like one kilogram of sugar, please.
Clinician:	Certainly. Anything else?
Recipient:	Yes (asks for a packet of cornflakes).
Clinician:	Would you like a large packet or small packet?
Recipient:	(asks price).
Clinician:	(give price of both packets).
Recipient:	(chooses packet).
Clinician:	Anything else?
Recipient:	(asks for apples).
Clinician:	(if recipient does not ask for a dozen apples) How many would you like?
Recipient:	(asks for a dozen apples).
Clinician:	Anything else?
Recipient:	Yes (asks for a dozen eggs).
Clinician:	Grade 1 or Grade 3?
Recipient:	(asks price of each).
Clinician:	(give price of Grade 1 eggs and Grade 3 eggs).
Recipient:	(chooses grade of egg).
Clinician:	What else would you like?
Recipient:	(asks for two tins of tomato soup).
Clinician:	Yes, of course. Large or small?
Recipient:	(asks price of each).
Clinician:	(gives price of each, and asks again how many tins they want).
Recipient:	(says how many tins they want, and if they want large or small). And a litre of milk. Is it still $1.20?
Clinician:	Yes. Anything else?
Recipient:	(says they want some coffee, and asks what sorts of coffee are available).
Clinician:	(name four sorts of coffee you have).
Recipient:	(asks which is cheapest).
Clinician:	(tell them which is cheapest coffee).
Recipient:	(says they will have a tin of that).
Clinician:	Right. Is that all?
Recipient:	Just one more thing – cheese. (asks if you have any Cheddar cheese).
Clinician:	I'm afraid we've only got (name sort of cheese you have).
Recipient:	Oh well – never mind. Right, how much is that please?
Clinician:	Er... let's see now... (add up prices, and tell recipient).
Recipient:	(mimes giving money to clinician) I'll give you a $10 note.
Clinician:	Thank you. You have (however much change). Here you are (mime giving change to recipient).
Recipient:	Thank you. Goodbye.
Clinician:	Thank you. Goodbye.

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Exercise 12.0 Two-scripted conversation – shopping role-play[77]

Recipient

Instructions

In this exercise you have been given a role to play in a pre-scripted conversation. You are going shopping, and have been given a shopping list so you know what to buy. You and the clinician will read alternatively from the script (your script is on the next page). Listen to the clinician's responses and reply appropriately. Please request clarification to confirm or clarify the details.

Shopping List
1. 1 kg sugar
2. 1 pkt cornflakes
3. 1.5 kg apples
4. 1 doz eggs
5. 2 tins tomato soup
6. 1 litre milk
7. 1 tin coffee
8. 250 gm cheddar cheese

[77] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.

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Recipient's script

Clinician:	Good morning. How can I help you?
Recipient:	Good morning. I'd like (ask for first item on your shopping list).
Clinician:	(responds)
Recipient:	(ask for second item on your shopping list).
Clinician:	(responds, and gives you a choice).
Recipient:	(ask for price of each choice).
Clinician:	(gives price of both choices).
Recipient:	(choose whichever choice you prefer).
Clinician:	(responds).
Recipient:	(ask for third item on your shopping list).
Clinician:	(responds).
Recipient:	(ask for fourth item on your shopping list).
Clinician:	(responds, and gives you a choice).
Recipient:	(ask for price of each choice).
Clinician:	(gives price of both choices).
Recipient:	(choose whichever choice you prefer).
Recipient:	(ask for fifth item on your shopping list).
Clinician:	(responds, and gives you a choice).
Recipient:	(ask for price of each choice).
Clinician:	(gives price of both choices).
Recipient:	(choose whichever choice you prefer, and reiterate how many tins you want.) And a litre of milk. Is it still $1.20?
Clinician:	(responds).
Recipient:	(say you want seventh item on your shopping list and ask what sorts are available).
Clinician:	(gives you the choices).
Recipient:	(ask which is cheapest).
Clinician:	(tells you which is cheapest).
Recipient:	(say you will have the cheapest brand. Name the brand).
Clinician:	(responds).
Recipient:	Just one more thing – cheese. (ask if they have any Cheddar cheese).
Clinician:	(responds).
Recipient:	Oh well – never mind. (Ask how much the bill is.)
Clinician:	(responds).
Recipient:	(say you only have a $10 note. Mime giving money to clinician).
Clinician:	(mimes giving change).
Recipient:	Thank you. Goodbye.
Clinician:	Thank you. Goodbye.

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What is Communication Therapy?

About the author
Christopher Lind is a Professor in the Dept of Speech Pathology and Audiology, Flinders University.
Address: Flinders University, PO Box 2100, SA 5000, Australia.
Email: chris.lind@flinders.edu.au

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This chapter deals with ways in which cochlear implant recipients develop skills to establish and maintain successful conversations. Recipients' conversational accomplishments have been expanded due to improvements in implant technology, and people with implants can now communicate in more challenging environments than previously thought possible.

The rehabilitation techniques in this chapter are designed to enable recipients to acquire strategies that increase access to – and enjoyment of – everyday conversation.

As social relationships are managed by talking, conversational competence is critical to one's success as a member of a culture and society. Conversational success may be measured by ease, speed and fluency, while conversational difficulties may be measured by ways in which this success is disrupted, due to the frequency and complexity of difficulties and the time taken to resolve the problems. Frequent conversational difficulties can result in withdrawal and isolation and have significant effects on a person's wellbeing. It is important not to underestimate the psychological effects of being removed from everyday conversation.[78]

In everyday conversations, people take turns at talking and listening. They build and interpret each turn from preceding turns, and time each action with extraordinary precision. Mostly, everyday conversations are fluent and this fluency is achieved with little or no attention to the process of interacting. However, this may not be the case when one or more of the participants in a conversation have hearing loss. In these situations, conversational difficulties may influence all the participants, so establishing or re-establishing successful interaction may require significant effort from everyone.

In current aural rehabilitation practices, clinicians tackle recipients' needs across several domains. These include their need to perceive words, understand language, make conversation and socialise. The clinician needs to be skilled in recognising which needs can be met by which form, or combination of forms, of intervention. This intervention is most effective when it establishes clear aims and objectives that are appropriate to the recipients' needs.

Traditional therapy has concentrated on training recipients to use visual and residual hearing skills to compensate for their limited speech perception. The context in which this speech material may occur – provided by the conversation itself and by the circumstances in which it took place – has been little considered.

[78] Noble, 1996; Noble & Hetú, 1994; Stephens, 1996; Stephens & Hetú, 1991

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This traditional approach implies an image of the individual as a relatively passive recipient of others' spoken messages. By contrast, in everyday conversation, the recipient's reduced perceptual abilities cannot be separated from the accessibility or quality of the signal. For example, lighting, background noise or other distractions compete for the recipient's attention.

To make rehabilitation as meaningful as possible, communication therapy needs to give the recipient practice in conditions that most closely mimic everyday speech. This enables them to build their perceptual skills in conversation.

This conversational approach to rehabilitation:

- employs presentation techniques that reflect pertinent aspects of everyday conversation
- presents materials in context rather than in isolation, so the recipient can draw on a common topic, theme, plot or script
- uses the recipient's chosen communication partners as talkers, and uses compensatory strategies employed by both conversation participants
- enables the recipient and their communication partner to take turns and shape the conversation as active participants, rather than relying on predetermined clinical materials
- provides recipients and their communication partners with environmental, language and conversational strategies to control aspects of daily spoken interaction.

The objectives of communication therapy are to have the recipient able to:

- **anticipate** potentially problematic and beneficial aspects of communication settings or environments, and develop relevant communication strategies
- **identify** the skills that make up ongoing successful communication in a range of settings, and manage their own and others' communication to maintain contact
- **recognise** when communication has failed, the possible reasons why it has failed and the skills required to re-establish successful communication
- **select** strategies that are most likely to increase the fluency and ease of conversation, whether they address the speaker's behaviour, the message content or the adverse effects of the environment
- **evaluate** the success and appropriateness of the strategies.

Various researchers have helped create the rehabilitation model presented in this chapter.[79] Theoretical, clinical and research texts containing more background and detailed analysis of current models of conversation are listed under 'Communication Therapy References' in Appendix 3.

[79] Tye-Murray, 1991, 1992; Tye-Murray, Knutson & Lemke, 1993; Tye-Murray, Purdy, Woodworth & Tyler, 1990; Tye-Murray & Witt, 1996, 1997; Tye-Murray, Witt & Schum, 1995; Tye-Murray, Witt, Schum & Sobaski, 1994; Caissie, Dawe, Donavon, Brooks & MacDonald, 1998; Caissie & Rockwell, 1993, 1994; Erber, 1985, 1987, 1992a, 1996, 1998a, 1998b, 2002; Erber & Greer, 1973; Erber, Lamb & Lind, 1996; Gagné and Tye-Murray, 1994; Pedley, Giles and Hogan, 2005; Kaplan, Bally and Garretson, 1985; Kricos and Lesner, 1995; Tye-Murray, 1998

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1 Meta-Communication: Talking about Talking

Recipients may report that their conversational difficulties are many, frequent or severe; however, they may not completely realise what aspects of the conversation are failing and causing their difficulties. People talk all day, yet few have a conscious understanding of what they are doing or the process they are using.

Communication therapy deals with conversational difficulty by providing techniques that bring aspects of conversation under the recipient's conscious control, so they can manage a situation that may previously have seemed beyond their ability. The ease with which recipients respond to these techniques depends on their ability to talk about talking – their meta-communication skills.

A recipient with good meta-communication skills can identify characteristics of their own communication needs as well as the characteristics of the:

- **communication partner**, for example, high-pitched voice, rapid rate of speech, foreign accent
- **environment**, for example, the room has wood panelling, and echoes
- **message**, for example, topic familiarity.

Such recipients can identify situations in which conversation is successful, and analyse the elements which lead to that success. They can also identify sources of conversational failure and their underlying causes. Such recipients often, but not always, move more easily through the rehabilitation process. Recipients with poorer meta-communication skills are often aware of situations in which trouble arises, but cannot analyse much of the detail.

Awareness of the level of a recipient's meta-communication skills allows the clinician to effectively and efficiently spend time early in the intervention helping the recipient to analyse their conversational difficulties. The clinician must develop recipients' meta-communicative awareness, and know about the elements of conversation that may most readily influence recipients' conversational success.

The following four sections give a brief overview of the major issues in conversation that influence meta-communicative awareness and may play a part in the therapy process.

Excellent theoretical and practical knowledge about everyday conversation is available in the sources listed in Appendix 3.[80]

Genres of talk

Conversations can take many different forms, have many purposes and occur in many settings. In any situation, conversations require a minimum of two people to alternate between roles as speaker and listener. Most commonly, conversations occur either face-to-face or over the telephone. There are certain **genres** of daily interaction, such as job interviews, business meetings, family gatherings, intimate

[80] Atkinson & Heritage, 1984; Eggins and Slade, 1997; Hutchby & Woffitt , 1998; Nofsinger, 1991; Ochs, Schegloff & Thompson, 1996; Schiffrin, 1994; ten Have, 1999; Wardhaugh, 1985; Watzlawick, Bavelas & Jackson, 1967

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dinners, lectures, telephone conversations, religious events, radio talk-back sessions or even bank robberies! [81]

Mutual ongoing understanding

There is a difference between a participant understanding an utterance and how they reveal their understanding during a conversation. The central issue in conversation is participants indicating they have understood each other's turns, by establishing **mutual ongoing understanding**.

People tend not to mark their understanding of a conversation by direct comment, but by taking the next turn. That turn is perceived by participants as being a logical or appropriate response to the prior turn or turns. Conversations are built on the continual development of mutually-shared contextual understanding. As such, contextual knowledge is not static or pre-determined but dynamic, and mutually shaped and negotiated by participants in the conversation.

Equal speaker rights

There are two general types of conversation. The first – in which participants have equal opportunity to start and end a topic and between whom conversational matters are mutually negotiated – may be called **interactional.** In interactional conversations, each participant can direct the flow of the conversation and has equal **speaker rights**. [82]

The second conversation type, which may be called **transactional**, does not give all participants equal opportunity to direct and structure the conversation. Transactional conversations are those in which information transfer is the central element. In such cases, there is a power imbalance, whether from an institution or individual, and unequal speaker rights.

This classification allows a recipient to distinguish between two situations such as a casual conversation with a friend or neighbour (an interactional conversation) and a job interview (a transactional conversation). In the interactional conversation, a recipient may feel they can deal with their hearing loss overtly whereas in the transactional conversation they may not easily be able to do so.

Conversation breakdown and repair sequences

Conversation breakdowns and their repair arise from turns in conversations that contain false starts, corrections and rephrasings, word finding problems and inaccuracies of fact. These may result in mishearings, misunderstandings or miscommunication. When these are not complex or frequent, they are dealt with immediately after the breakdown has occurred and have little impact on the flow of conversation. However, should the breakdowns and subsequent repairs be frequent, complex or long enough to impede the flow of interaction, the participant may lose their desire to participate in the conversation and want to end it. As a result, repairing communication breakdowns is critical to the flow of conversation and the perception of its fluency and success.

[81] Sacks, Schegloff & Jefferson, 1974; Schegloff, 1997
[82] Taylor & Cameron, 1987; Cheepen, 1988; Pichora-Fuller, Johnson & Roodenburg, 1998

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Although a detailed discussion of each type of repair and its relation to specific conversational incidents is beyond the scope of this chapter,[83] several points may be made in summary:

- **Repairs occur in every conversation.** All people repair whether or not they are hearing-impaired. Not all repair sequences arise solely from a hearing-impaired participant's involvement.
- **People only repair conversation when they feel it is warranted.** Even when a conversation can be repaired, an attempt to do so is not always made.
- **Most repairs are carried out easily and swiftly.** They generally do not interrupt the flow of conversation or impede its understanding. Clinicians have reported that some recipients are hesitant to have conversations because they are afraid their need to make repairs will hinder the flow of conversation. Recipients need to understand that just because repairs occur, it does not mean they will interfere with the flow.
- **Most people repair their own conversation breakdowns.** The structure of conversation seems to provide more opportunities for the speaker to resolve the miscommunication than the listener.
- **Repairs can result from mishearing.** Such repairs are initiated because one participant has not heard the other clearly, for example, 'Did you say Saturday?'
- **Repairs can also result from one person not understanding another's linguistic reference (for example, 'Did you mean Joan Smith or Joan Brown?') or from one person misunderstanding another's pragmatic intent (for example, 'I don't mean I** want **to go to the shops').** These two repairs can arise in response to either participant's initiation. By contrast, we would expect an implant recipient to initiate more repairs from mishearing than their communication partners.

[83] For excellent discussions, see Schegloff, Jefferson and Sacks, 1977; Levelt, 1983; Remler, 1978; Schegloff, 1979, 1987, 1992, 1997; Schlenk, Huber, & Willmes, 1987. For a more detailed review of repair and acquired hearing impairment, see Lind, Hickson, & Erber, 2004

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2 Preparing for Clinical Exercises

Emphasising everyday aspects of communication

In the rehabilitation process, the clinician should deal with the everyday aspects of the recipient's communication **as the recipient sees them.** Each situation needs to be analysed with respect to the people involved, the nature of the conversation and the physical environment.

Recipients should be encouraged to list conversational situations that cause them the most difficulty. These situations can be contrasted with those in which the recipient feels that the conversation is successful.

The Client Oriented Scale of Improvement (COSI) is a formal self-assessment that focuses on the client's view of their own rehabilitation needs.[84] Experience has shown that by assessing a recipient's needs at various times after implantation using such a tool, a clinician can discover which aspects of their everyday communication are most in need of remediation.

Creating realistic communication environments

To conduct therapy effectively, it is necessary to create acoustic and visual environments that are realistic for recipients. At the same time, environments need to be sufficiently controlled so recipients neither fail outright nor achieve effortless success. Clinicians need to adjust the environment continually so the recipient is successful enough to remain motivated. Task difficulty is usually varied by controlling the presentation mode – auditory-only, visual only, audiovisual – and the acoustic environment – quiet versus noise.

Typically, speech material has been presented in background noise (for example, white noise, speech noise, cafeteria noise or four-speaker babble) and at various signal-to-noise ratios. While the clinician can control the environment in a clinical setting to manipulate the conversational performance of the recipient, it is difficult to recreate everyday environments in which recipients are likely to interact. The most effective ways to create background noise are by duplicating environmental sounds that are relevant to the recipient's everyday environment (for example, by turning the radio on, or by using recorded music).

Using speech perception tasks

The communication therapy model emphasises tasks that require a response from the recipient other than repetition of the stimulus utterance. Perception without comprehension is not the basis for successful conversation. It is important to ensure that the answer or reply given is based on a correct understanding of the question or utterance that led to it.

Using this model, speech perception tasks aim to increase a recipient's awareness of how to select strategies which resolve particular difficulties. They give the recipient practice in talking in different perceptual conditions and demonstrate how different strategies can impact on a conversation.

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[84] Dillon, James & Ginis, 1997

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Real-time processing and anticipation

Many rehabilitation exercises use predetermined topics and contexts. This puts the recipient at a disadvantage. They do not have full access to the mutual ongoing shaping of context that is a hallmark of everyday conversation. One way of minimising the effect of this is to give the recipient some prior information about the topic. This may mean identifying the topic, discussing the topic or reading the first paragraphs of text.

This manoeuvre is demonstrated in some of the synthetic exercises in the previous chapter. It allows sufficient success in the early stages of an exercise, when recipients are most likely to struggle with the lack of predictability in the new information, and helps motivate the recipient to continue.

Bringing the flow of information in a conversation under a recipient's conscious control helps them manage some difficult communication situations. If it is possible to manipulate the complexity of a communication partner's utterances, potential problems with, for instance, unfamiliar topics, unclear speech or background noise, may be managed and mitigated to a degree. How an utterance is phrased will, to some extent, dictate or influence how the reply is phrased. Similarly, if the recipient can easily confirm elements of the prior utterance, or clarify a word or key phrase with minimal imposition on the flow of the conversation, conversational fluency may be more easily maintained (see the 'Clarification Strategies' section in the 'Synthetic Training' chapter on page 84).

Improving communication with the recipient's communication partner

It is important to improve communication between the recipient and their frequent communication partner or partners. As such, the clinician's role as presenter of the speech materials or as an interactive partner should be limited to the initial training in or introduction of each rehabilitation procedure.

Exercises 3.0–7.0 may all be conducted between the recipient and their chosen communication partner, with the clinician as observer. This creates a more realistic activity. Once techniques have been learnt and practiced under the supervision of the clinician, the continued development of skills may be transferred to the recipient's everyday life.

The clinician should identify a period of clinical activity during which techniques are introduced to the recipient and their communication partner – generally a period of four to six weeks, but this can be reduced or extended. This period allows discussion and practice of the techniques and gives the recipient and their partner enough time to develop a basic competence. The recipient and their partner can then 'take the techniques away' and practice them together without the clinician overseeing the practice.

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3 Speech Perception in Conversational Context

While speech perception exercises are covered in some detail in the 'Analytic Training' and 'Synthetic Training' chapters, the exercise described in this section puts speech perception into a simple conversational context involving a two-turn sequence.[85] In *exercise 3.0*, the context cues are provided in the prior spoken turn rather than in the grammar and semantics of the stimulus sentence.

The recipient says the first of a pair of sentences (the 'context sentence'). The clinician then says the second sentence (the 'stimulus sentence') which the recipient repeats.

To demonstrate the effects of prior context, two types of context sentence are used. The first type is called a 'related context utterance'. This sentence is a question to which the following stimulus sentence is a logical response. For example, the related context utterance could be 'Why haven't your parents left on their trip?' The stimulus sentence is: 'They found out their flight was cancelled.'

The other type of context sentence is called a 'neutral context utterance', that is, a sentence that contains no clues to the response. For example, the neutral context utterance could be 'What's been happening?' or any similar semantically or contextually empty 'Wh' question.

The clinician allocates either a related context or neutral context utterance to each of 25 stimulus sentences. A list of the randomly allocated context utterances is given to the recipient at the beginning of the task. Two such lists are provided in *exercise 3.0*.

The related context stimuli are listed with each stimulus sentence in the clinician's copy of *exercise 3.0*, but should not be presented to the recipient in this way.

The recipient says each context sentence, looks up, and the clinician says the stimulus sentence, after a conversationally appropriate pause – usually up to, but not longer than, one second. The recipient then repeats the stimulus sentence or writes it down.

The accuracy of perception of each sentence is noted by the number of key words the recipient correctly identified in each stimulus sentence (key words are underlined in *exercise 3.0*). Commonly, the clinician will compare the scores that resulted from using the related context utterance and neutral context utterance with the stimulus sentence. Typically, recipients will score higher on the sentences associated with the related context conditions. However, clinical experience has shown that there is occasionally a recipient who can perceive the sentences well whether or not there are prior context cues.

This exercise:

- demonstrates how the context influences the perception of the following turn; sentence predictability is not limited to within-sentence syntactic and semantic cues, but can also be influenced by prior linguistic cues

[85] Erber, 1992b; Flynn & Dowell, 1999; Gagné, Tugby & Michaud, 1991; Hutchinson & Cairns, 2000; Lind, Erber & Doyle, 1999.

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- demonstrates the effect of altering the contextual relationship between the context sentence and the stimulus sentence on the accuracy of perception of the stimulus sentence
- highlights the manner in which each turn is embedded in the context of the conversation
- demonstrates the effects of prior turns in conversation on the recipient's ability to perceive a stimulus sentence.

There are parallels between the effects of prior sentence context in this exercise and the patterns of within-sentence word identification in speech perception tasks such as the SPiN test.[86] This exercise can also be used with *exercises 5.0, 6.0 and 7.0* in this chapter.[87]

Exercise

3.0 The effects of prior linguistic context on the perception of 'next turn' sentences

[86] Kalikow, Stevens & Elliott, 1977
[87] Erber 1996, 2002

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4 The Sent-Ident Procedure

This section and the following three sections present key techniques and materials developed by Dr Norman Erber.[88] Interested readers are encouraged to read more of the theory and practice of these techniques in the original texts.

An adaptive sentence-based speech perception task

The Sent-Ident procedure mimics two important elements of conversational behaviour:

- The recipient can request repetition of sentences that are misunderstood or partially understood.
- The clinician can change the way in which they present such sentences, for example, with or without visual cues.[89]

Sent-Ident is conducted using a list of grammatically simple sentences (Erber's original sentence list is presented in *exercise 4.0*). The clinician presents each sentence and the recipient repeats it as accurately as possible. If the sentence is not repeated with 100 per cent accuracy, the clinician presents the sentence again, and repeats it at most four times more.

The clinician may first say the sentence to the recipient under conditions where speech perception problems may arise, for example, with reduced intensity, reduced or absent auditory or visual cues, reduced clarity or at an increased speed. Typically, the clinician reads the sentence out at a normal conversational level (approximately 60 to 65 dB) without using visual cues.

If the recipient does not repeat the sentence correctly, the clinician repeats it under the same conditions as the first presentation. Each successive presentation, if required, occurs under slightly more favourable speaker conditions, and uses common methods of repair such as repetition, rephrasing and emphasis.

For example, in the third presentation, the sentence can be repeated with emphasis on one or more of the words the recipient missed in the previous response. In the fourth presentation, one or more key words can be presented with visual cues and, in the fifth presentation, the sentence can be presented with all words visible.

It may be more useful for some recipients to conduct this exercise using visual cues in the first instance and progress through successive presentations with the addition of auditory cues. Alternatively, the clinician may conduct the exercise using increased audiovisual cues while presenting the sentences in background noise.

The best way to measure the recipient's performance is by counting the number of times a particular repair strategy is successfully used to correctly perceive each sentence. The clinician will find that, for each recipient, certain repair strategies are more effective than others in resolving errors.

[88] Erber, 1996, 2002.
[89] Erber, 1996, pp. 85–87.

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This exercise enables the clinician to assess which strategies the recipient is most likely to succeed at, and thus which strategies can be most successfully used in requests for repair in everyday conversation. Sent-Ident is adaptive as each presentation of the stimulus can be altered to meet each recipient's specific needs. Recipients can be shown which adaptive techniques are most helpful for their own situations. These techniques may form the basis of conversation-repair training with their communication partner. The adaptive method of presentation used in Sent-Ident may be applied to many different speech perception tasks, particularly those described on page 93 of the 'Synthetic Training' chapter.

Exercise

4.0 Sent-Ident

DVD

Scene 24: Sent-Ident

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5 Within-Sentence Predictability

People commonly rely on context cues in a sentence so they can follow the speaker's meaning and anticipate possible turn-taking opportunities. Context cues can be:

- semantic (relating to meaning and the relationship between words)
- syntactic (relating to the grammatical arrangement of words)
- lexical (relating to the choice of words used).

These cues arise from the sentence's redundancy, although not all sentences provide equal contextual support.

Exercise 5.0 presents the recipient with three sets of simple but incomplete sentences.[90] In the first set, the missing portion of the sentence is highly predictable, due to the rich prior context cues. The second set has reduced predictability and the final group of sentences provides almost no prior context cues (Erber's original sentence sets are listed in *exercise 5.0*).

The recipient is given a written copy of the sentence list with the final sentence elements left out. The sentence is then presented audiovisually to the recipient. The word or phrase that completes the sentence is presented with reduced cues, for example, visual or auditory cues only, partially obscured cues, or presentation in background noise.

The clinician needs to make up their own missing words and phrases, keeping in mind that the predictability of the word or phrase they select will affect the ease of the task. Some examples are provided in *exercise 5.0*.

The recipient is asked to identify the missing word or words and write the entire sentence down. Once the task is completed, the clinician and recipient may discuss how predictable the missing parts of the sentence were. The greater the predictability in the sentence structure, the more likely it is to influence the accuracy of the recipient's perception.

This exercise allows the clinician and recipient to discuss the variability of within-sentence context cues, such as the manner in which these cues may be relied on and how they may be manipulated. For example, cues can be presented under difficult listening conditions. *Exercise 6.0*, in the next section, contains examples of such manipulation.

Exercise

5.0 Sentence predictability

DVD

Scene 25: Sentence predictability

[90] Erber, 1996, pp. 175–178.

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6 Shaping Others' Conversational Turns

How capable a recipient feels in accessing and maintaining a conversation depends largely on how much they can use their turn to limit the possible complexity of another's turn. This is especially true under adverse listening conditions such as in a poor environment, or when the other person is unclear in their speech or speaks about an unfamiliar topic.

In the previous section, ways in which the cues in a sentence can influence the predictability of subsequent sections of the sentence were demonstrated. In contrast, *exercise 6.0*[91] helps recipients and their communication partners understand the manner in which the grammatical form of a question may shape and help predict its answer.

In this exercise, several examples are provided to the recipient of five different sentence types:

1 **Yes/No questions** – there are only two likely, highly predictable answers.
2 **Limited- or forced-choice questions** – there is a narrow range of answers, which are contained in the question
3 **Specific or product questions**, such as 'What time does your train arrive?' or 'Which football team do you support?' – answers are from a small and clearly-defined range.
4 **General or process questions** such as 'Why do you like living in this city?' or 'Why didn't you like that film?' – answers are longer, more complex and less predictable, and their ease of comprehension depends on the recipient's ability to anticipate pertinent issues about the topic.
5 **General statements** like 'I always wear gloves when I work in the garden' – answers are not constrained at all as the statement does not require a related turn. These statements are like pre-topic initiators leaving the subsequent topic open to the participants' negotiation.

The recipient is asked about the sort of answers they would expect to be given to each type of question. The complexity and predictability of the reply that the recipient would expect to receive in response to each sentence type can also be discussed.

Often, recipients can also identify the ways in which each group of sentences differs from each other.

In an unpublished study by Erber (personal communication), examples of the five types of initiator were presented verbally to a group of adults. Each person's responses were recorded and classified in terms of their length and complexity. The most predictable answers came from the limited-choice questions, followed by the specific questions and then the general questions. Surprisingly, Yes/No questions often generated replies that were as complex as replies to the general statements. It would seem that Yes/No questions seldom elicit only a Yes/No response in general conversation. Rather, in a conversational context, they represent an invitation to expand on the current topic.

[91] Erber, 1996, pp. 194–202

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This exercise allows the clinician and recipient to discuss the manner in which the grammatical structure of one turn in conversation may influence the structure and complexity of the next turn. The clinician can use this material to help recipients understand how conversation is processed and to learn skills in controlling aspects of others' turns in the conversation.

Recipients may use their awareness of the relationship between the structure of the question and the complexity of the response to help frame their own conversational turns. When the conditions (that is, speaker, message and environment) are conducive to fluent interaction, the recipient may speak turns that are more open-ended in their range of possible responses. As the conditions become poorer, the recipient might revert to more structured questions. More generally, a recipient can move between using questions that are likely to result in predictable answers and those that invite a greater choice of replies, depending on their familiarity with the content.

Exercise

6.0 Asque

DVD

Scene 26: Asque

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7 Confirming and Clarifying Understanding

In conversation, participants may mark their understanding of a prior sentence by feeding back aspects of the content. Many people with a hearing impairment report that their friends and family complain they 'don't listen'. This is often due to their use of non-specific requests for clarification such as 'What?' or 'Huh?' This makes appropriate clarification by the communication partner difficult.

Quest?ar is an exercise that helps the recipient acquire expertise in developing suitable clarification strategies.[92] Recipients will find, with practice, that clarification strategies can resolve a misunderstanding or partial understanding, and be used to check that they have understood the other person's turn correctly.

Exercise 7.0 mimics aspects of everyday conversation with a communication partner. The focus is on the recipient confirming or clarifying the partner's turn.

Before starting the exercise, the recipient and clinician or communication partner choose a topic for conversation. The recipient is given a 'half-script' in the form of 30 questions. The recipient asks each question, the communication partner responds and the recipient confirms the information. If the recipient has misunderstood the communication partner's response, turns are taken until both clearly agree on the content of the communication partner's response to the question.

This exercise shows how communication partners may cooperate to clarify or resolve breakdowns in conversation. The responsibility for their resolution does not reside with one or other participant but is shared in their interaction. The task allows discussion about:

- the frequency of repair
- the number of turns needed to resolve each misunderstanding
- how smoothly the interaction and the confirmation went
- differences in the accessibility of responses
- whether breakdowns were resolved by cooperating in turn-by-turn interaction.

By practicing clarification strategies, the communication partner will be able to specify the part of the information that the recipient missed.

If the recipient is anxious about the exercise, aspects of the chosen topic can be discussed before commencing. The clinician may also simplify the task by limiting the number of questions. Discussion following the exercise may centre on the relationship between the complexity of the response and the question, and the ways in which the information was clarified.

Exercise

7.0 Quest?ar

DVD

Scene 27: Quest?ar
Scene 28: Quest?ar – familiar talker

[92] Erber, 1996, pp. 188–194.

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8 Continuous Discourse Tracking and Repair Management

Continuous discourse tracking (CDT or 'tracking') has helped clinicians bridge the gap between 'speech perception as information transfer' and 'conversation as social interaction'. It enables speech perception training to place equal emphasis on the role of speaker and receiver, rather than on the recipient. By extension, it emphasises the cooperation that underpins everyday successful conversation. [93]

CDT was originally developed to assess the speed of information transfer from the sender to the receiver.[94] This was measured by the amount of text transmitted and received with 100 per cent accuracy over a period of time. This amount was compared across instances by referring to the number of words transferred per unit of time (typically, word-per-minute measures). Unfortunately, it is difficult to control the number of variables that impinge on the word-per-minute rate. This limits the usefulness of this tool as an indicator of conversational flow.

With increased emphasis on conversational **fluency** rather than on the speed of information flow, tracking may be used to:

- assess and practice conversational techniques in which misunderstandings occur and are resolved
- establish the patterns of repair that most quickly, easily or fluently resolve communication breakdown.

Tracking has been presented on pages 85–87 of the 'Synthetic Training' chapter. By contrast, the goal in this chapter is not speed of information transfer but shared responsibility in resolving conversation breakdowns.

A model for conducting tracking

The clinician or communication partner reads a passage of text aloud, which could be, for example, a newspaper or magazine article or a passage from a novel. The clinician reads out between five and eight words at a time. The recipient is asked to repeat the segment of text. The goal is to have the recipient repeat the portion of text with 100 per cent accuracy.

Tracking is commonly conducted in ten-minute segments. Participants report that longer segments are tiring and require too much concentration. There are three possible outcomes each time a portion of text is read aloud:

1 **The recipient repeats the segment with 100 per cent accuracy**, so the clinician reads the next portion of text
2 **The recipient recognises that they have not heard the text accurately**. They may be able to repeat one or two words, all but one or two, or none of the text.

[93] de Filippo, Lansing, Elfenbein, Kallaus-Gay & Woodworth, 1994; Fenn & Smith, 1987; Hochberg, Rosen & Ball, 1989; le Roux & Turton, 1990; Lesner & Kricos, 1987; Lesner, Lynn & Brainard, 1988; Lunato & Weisenberger, 1994; Osberger, Johnson & Miller, 1987; Owens & Raggio, 1987; Owens & Telleen, 1981; Spens, 1995; Tye-Murray & Tyler, 1988
[94] de Filippo & Scott, 1978

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With this awareness, the recipient instigates the repair strategy. This outcome is known as the **receiver-initiated repair**.

3 **The recipient fails to repeat what they have perceived with 100 per cent accuracy, and is unaware of the errors.** In this case, the clinician, noting that the recipient's repetition is not sufficiently accurate, instigates the repair. This outcome is known as the **sender-initiated repair**.

The tracking task focuses on the content of the clinician's utterances. However, clinical experience has shown that both participants tend to develop strategies that meet each other's communication needs quite rapidly. It is the ability of one or both participants to modify their communication behaviours that is the essence of this exercise.

While tracking resembles aspects of conversation, it is important to recognise the ways in which it differs from everyday talk:

- Conversation is spontaneous, while all text in tracking is predetermined, although the content and sequencing of the repair sequences are unrestricted.
- Conversation involves turn-taking, but the turn-taking process in tracking is limited as the recipient cannot direct the flow of topic in the interaction.
- Conversation can be followed if one has access to as little as only 40 to 60 per cent of the content of another's utterances. The standard of 100 per cent accuracy in tracking is exacting and somewhat unrealistic. Clinical experience indicates that the flow of the task can be enhanced if the clinician allows around 90 per cent accuracy of repetition.

The advantages of tracking are that:

- In conversation, each turn is both context-dependent and context-renewing. The text in tracking also has a flow of information and participants may use context clues such as theme or plot. This is a distinct advantage of tracking over more conventional sentence-in-isolation speech perception testing.
- Conversation requires participants to cooperate. Tracking encourages participants to cooperatively undertake repair strategies.

Scoring and evaluating tracking performance

There are two different methods for scoring tracking activities, which can be combined if wished. As mentioned earlier, the scoring method most commonly used is the words-per-minute rate at which the text is transmitted from clinician to recipient. This score indicates the speed of information transfer, which includes time spent in repair or clarification of difficult passages of text. By contrast, the clinician may focus on the **processes** that took place during the information transfer, for example:

- How many instances of breakdown and repair occurred?
- How many turns were required to resolve the breakdowns?
- Were the repairs sender- or receiver-initiated?
- What strategies worked most effectively to resolve breakdowns?

When the clinician addresses these questions with the recipient, tracking can be used to demonstrate and practice the tactics and strategies that resolve conversation breakdowns.

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The selection of text material in tracking

One strength of tracking is that it may be conducted with any written material. Given the standard ten-minute segment of tracking, portions of text should be at least 400 to 500 words long, preferably longer. The benefit the receiver gains from the ongoing textual and thematic cues can be maintained by use of longer passages over several segments or sessions of tracking. The weakness of the use of uncontrolled passages is the variability in complexity of content, theme and grammar. It is not always useful to compare rates at which information is being passed from one person to another when this is influenced by differences in text.

When the tracking task is focused on information transfer, recipients generally take whatever time is needed to overcome a misunderstanding or misperception. This can lead to an unrepresentative image of recipients' ability to interact. It also unduly emphasises an aspect of tracking that is not inherently conversational – the inability of the receiver to address misunderstandings by directing the topic of the conversation.

Because the conversational model focuses on the management of repairs, it is important to maintain recipients' motivation to continue. The factors impinging on the task are best managed so the participants do not lose interest. The factors the clinician may need to manipulate include:

- **text** – complexity and familiarity
- **speaker** – speed, volume, clarity and familiarity
- **environment** – noise, distance and lighting.

Three clinical strategies have proven most effective.

The first strategy is to allow the recipient access to some contextual information before commencing the task. Recipients often struggle with the first few sentences of a new text, as they try to 'tune in' to the grammatical style, developing themes, names, situations and other context cues. If a recipient is anxious about the task, the clinician may choose to have them read a small introductory portion of the passage before commencing the tracking. Still, recipients will probably make errors at the start of the passage. Once the theme has been established, the errors tend to reduce as the recipient anticipates future content.

Often the theme and topic of a text will change near the end of a paragraph. The number of repairs may increase at these points and speed of performance may decline temporarily.

The second strategy is to include a 'fall-back' repair strategy for particularly difficult words or phrases. The clinician writes down a section of the text, for example, proper names and complex or unfamiliar vocabulary, once a certain number of unsuccessful attempts have been made to resolve it. The process of resolving these difficulties (text, specificity of repair initiation and the repair itself) can make interesting points for discussion once the exercise is completed.

The third strategy deals with the relationship between the repetition of the text and its comprehension. Recipients do not always keep track of a text's meaning while they are repeating it. The clinician could, to make the comprehension task more than just a memory exercise, give recipients a list of comprehension questions before commencing the tracking.

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Involving the communication partner in tracking

The purpose of adapting tracking to involve the communication partner is to have the recipient and a frequent communication partner learn repair strategies that are pertinent to their daily communication.[95] The conditions under which the tracking is conducted should depend on the recipient's everyday communication needs. For example, it may be conducted:

- with or without visual cues
- in quiet or in background noise
- face-to-face or over the telephone.

After the recipient has spent some time engaged in tracking exercises with the clinician, the clinician demonstrates tracking to the recipient's communication partner, for example, spouse or friend. The recipient observes the interaction, with the clinician acting as the sender and the communication partner as the receiver. This exercise needs to be done under conditions that make it difficult for the communication partner to receive the message. Imitating hearing loss can be done with a HELOS simulator,[96] or by having the communication partner do the task under headphones with competing noise – for example, white noise, four-speaker babble, cafeteria noise or simply radio static. For many communication partners, this will be the first time that they have experienced a hearing loss.

In the next stage, the clinician becomes the observer while the communication partner reads the text to the recipient. The recipient and the communication partner begin practicing repair strategies, and establish the communication strategies that work for them.

Discussion about repair strategies following tracking often addresses the:

- frequency and speed of repair (time taken or the number of turns taken)
- patterns of repair most commonly used
- relative success of each repair strategy in overcoming the trouble spot.

Frequent repair activity disrupts the flow of conversation and may adversely influence the perception of conversational fluency and success. The occurrence of repair in tracking, and indeed in everyday conversation, may be evaluated by reference to the time spent in repair, the number of turns in the repair sequence, the complexity of the repair sequence and the overall fluency of the exercise.[97]

Ultimately, the recipient should take the tracking task home and practice it with family members and friends, in their own environment and using their own material.

A proforma for recording repair types and turns taken in repair is presented on the next page.[98] This has proven to be a useful clinical tool when discussing conversational strategies with recipients, and may also be used as an outcome measure of therapy success.

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[95] Erber, 1996, 2002; Erber & Lind, 1994
[96] Erber, 1987, 1996, 2002
[97] Erber, 2002, pp. 164–167.
[98] The author wishes to acknowledge Mrs Lynelle Williams who designed the original version of this form. This modified version of her original design appears with her express consent.

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Table 5. Profile for analysis of conversation repair in tracking

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
Listener-initiated requests for repair												
1 General request, for example, 'What?' 'Huh?' 'Sorry?'												
2 Specific request												
a. Elliptical request: 'In the…?' 'She went…?'												
b. Full request: 'What did he do?'												
Speaker-initiated repairs												
1 Repetition												
a. Shortened portion of text												
b. Without emphasis												
c. With emphasis												
2 Rephrasing												
a. Simplify												
3 Reframing												
a. Complex structure												
b. Semantic cue												
4 Spell key word or words												

This proforma can be more easily photocopied from Appendix 2.

DVD

Scene 29: CDT – receiver strategies
Scene 30: CDT – sender and receiver strategies

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9 Telephone Training and Communication Therapy

With implantation and new processor strategies overcoming many of the problems in face-to-face communication, the next challenge for recipients is using the telephone.

People seldom initiate a face-to-face conversation without any information about the person they are speaking to. However, when answering the telephone, people often commence the interaction without any contextual or background cues about the speaker or message. Alongside the necessity for increased emphasis on auditory-only processing and the quality of the signal, the differences in the patterns of communication over the telephone require special attention. In telephone conversations, all conversation markers (for example, holding a turn, requesting a turn or marking emphasis) need to be manifested using acoustic cues only. Other than this, with respect to the interactive or conversational behaviours, telephone communication is generally like face-to-face communication.

When telephone training is the focus of clinical work, the questions that need to be asked should include:

- How frequently is the telephone used?
- Does the recipient initiate more calls than they receive?
- Who does the recipient most commonly interact with?
- Does the recipient use any additional devices when using the telephone?
- What situations and which speakers are the easiest and hardest to deal with?
- What sort of strategies does the recipient use to deal with telephone difficulties?
- Does the recipient use relay services?
- Are alternative electronic media used, for example, fax or email?

Many recipients mention the panic associated with answering the telephone as neither the caller nor the topic is known. This means the predictability provided by these important context cues is not available. Recipients often report feeling pressured to communicate fluently from the onset of the call when they know there will be some difficulty in establishing sufficient contact to achieve the desired fluency. This fear may be lessened in part by using the techniques described in this chapter and *exercises 3.0–7.0*.

Interested readers are directed to more detailed discussions of telephone tactics and strategies.[99]

[99] Erber, 1985; Tye-Murray, 1998; Giles, 2005

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10 Outcome Measures

Assessment tools, such as Sent-Ident[100] and the proforma on page 196 for reporting patterns of repair strategies, are good ways of evaluating recipients' performance in communication. Another effective assessment tool is the self-report format, where the recipient evaluates their own performance. Even if the clinician has the time and resources to more directly and objectively assess recipients' everyday behaviour, there are few better assessment formats by which communication success may be judged.

One self-report tool particularly suited to this purpose is the Client-Oriented Scale of Improvement, or COSI, although this was originally designed for measuring self-reported everyday benefits associated with hearing-aid use.[101] The listing and prioritising of recipients' stated concerns and the evaluation of outcomes in both relative and absolute terms makes the COSI a most suitable method for assessing rehabilitation techniques.

Among the many self-report scales[102], those lending themselves to assessing aural rehabilitation outcomes include The Hearing Handicap Inventory for the Elderly (HHIE)[103], the Communication Profile for the Hearing Impaired (CPHI)[104] and the Abbreviated Profile of Hearing Aid Benefit (APHAB).[105] Although these scales were not developed with communication therapy in mind, they may be applied for this purpose.

[100] Erber, 1996
[101] Dillon, James & Ginis, 1997
[102] See Noble, 1998 for a comprehensive review
[103] Newman & Weinstein, 1989; Ventry & Weinstein, 1982, 1983; Weinstein, Spitzer & Ventry, 1986; Weinstein & Ventry, 1982
[104] Binzer, 2000; Demorest & Erdman, 1986, 1987, 1988, 1989
[105] Cox & Alexander, 1991, 1992, 1995

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Exercises

In the following exercises, the words 'Clinician' and 'Recipient' appear in the top right-hand corner of the exercise, to indicate their intended use:

- **Clinician**: contains the full list of potential presentation
- **Recipient**: guide for the recipient to follow the exercise.

Where there are separate 'Clinician' and 'Recipient' pages, the 'Clinician' page should not be shared with the recipient.

For material obtained from published sources, an acknowledgement appears in the lower left-hand corner, and the full source appears in Appendix 3.

Please note that material suitable for continuous discourse tracking can be viewed in Appendix 3 under 'Communication Therapy References'.

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Exercise 3.0 The effects of prior linguistic context on the perception of 'next turn' sentences[106]

Clinician

Instructions

1 Give the recipient one of the lists of questions presented on pages 200–201. Each list contains 24 context questions which are either related to the stimulus sentence (these are written as 'Rel.' in your copy below) or contextually neutral context questions, such as 'What's happening?'

2 Ask the recipient to read the first question on their list and reply with the response utterance ('Resp.' on the list below). The recipient should repeat the utterance back as accurately as possible. It is expected that the recipient will have more difficulty with the sentences following the contextually neutral questions than the prior context questions (or 'Rel.' questions).

3 Score the recipient's progress by counting how many key words the recipient identifies correctly (underlined words in the 'Resp.' sentences are the key words).

1 Rel. Why do you put up with the neighbours' noise?
Resp. **We don't like making a fuss about it.**

2 Rel. Why haven't your parents left on their trip?
Resp. **They found out that their flight was cancelled.**

3 Rel. Why are you going to the post office?
Resp. **I have to send all my Christmas mail.**

4 Rel. Why did your son leave his job?
Resp. **He was offered a better position somewhere else.**

5 Rel. Why are you so concerned about your daughter?
Resp. **We think she might be getting a cold.**

6 Rel. Why is you father so angry with the doctor?
Resp. **He wasn't told about the results of the test.**

7 Rel. Why is your brother so careful with his money?
Resp. **He hasn't had a job for nearly six months.**

8 Rel. Why do you travel by taxi so often?
Resp. **I don't have my driver's licence.**

9 Rel. Why do you need new shorts?
Resp. **I broke the elastic in my old pair.**

[106] Adapted from Lind, Erber & Doyle, 1999

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10 Rel. Why does your aunt want to buy a puppy?
Resp. **She wants a pet to keep her company.**

11 Rel. Why is that child standing on the chair?
Resp. **She can't reach the top shelf by herself.**

12 Rel. Why were your friends ready to leave before breakfast?
Resp. **They wanted to start their trip early.**

13 Rel. Why haven't you finished painting the bedroom?
Resp. **We're waiting for the undercoat to dry.**

14 Rel. Why do you have the lamp on?
Resp. **We need more light in this room.**

15 Rel. Why did your mother go to the bank?
Resp. **She didn't have enough money to go shopping.**

16 Rel. Why are you suddenly interested in sculpture?
Resp. **I read an interesting book on it recently.**

17 Rel. Why is your daughter repeating her studies?
Resp. **She failed her exams last year.**

18 Rel. Why did you lay carpet in the hall?
Resp. **We found the wooden floor was too noisy.**

19 Rel. Why is your brother so tired and hungry?
Resp. **He spent all last night lost in the snow.**

20 Rel. Why are your parents selling their house?
Resp. **They have decided to move to the country.**

21 Rel. Why weren't the children home when I called?
Resp. **They were playing in the park all afternoon.**

22 Rel. Why are you walking around in bare feet?
Resp. **I can't find my shoes and socks anywhere.**

23 Rel. Why do your parents visit so often?
Resp. **They like to spend time with the family.**

24 Rel. Why didn't those people get wet in the rain?
Resp. **They ran for cover when the storm began.**

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Exercise 3.0 The effects of prior linguistic context on the perception of 'next turn' sentences (list one)[107]

Recipient

Instructions
Read out question 1. The clinician will answer. Repeat or write down as much of the clinician's answer as you can. Then go on to question 2.

1 Why do you put up with the neighbours' noise?
2 Why haven't your parents left on their trip?
3 What's been happening?
4 What's been happening?
5 Why are you so concerned about your daughter?
6 What's been happening?
7 Why is your brother so careful with his money?
8 Why do you travel by taxi so often?
9 What's been happening?
10 What's been happening?
11 Why is that child standing on the chair?
12 What's been happening?
13 What's been happening?
14 What's been happening?
15 Why did your mother go to the bank?
16 Why are you suddenly interested in sculpture?
17 What's been happening?
18 Why did you lay carpet in the hall?
19 Why is your brother so tired and hungry?
20 What's been happening?
21 What's been happening?
22 Why are you walking around in bare feet?
23 Why do your parents visit so often?
24 What's been happening?

[107] Adapted from Lind, Erber & Doyle, 1999

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Exercise 3.0 The effects of prior linguistic context on the perception of 'next turn' sentences (list two)[108]

Recipient

Instructions
Read out question 1. The clinician will answer. Repeat or write down as much of the clinician's answer as you can. Then go on to question 2.

1 What's been happening?
2 What's been happening?
3 Why are you going to the post office?
4 Why did your son leave his job?
5 What's been happening?
6 Why is your father so angry with the doctor?
7 What's been happening?
8 What's been happening?
9 What's been happening?
10 Why does your aunt want to buy a puppy?
11 Why do you need new shorts?
12 Why were your friends ready to leave before breakfast?
13 Why haven't you finished painting the bedroom?
14 Why do you have the lamp on?
15 What's been happening?
16 What's been happening?
17 Why is your daughter repeating her studies?
18 What's been happening?
19 What's been happening?
20 Why are your parents selling their house?
21 Why weren't the children home when I called?
22 What's been happening?
23 What's been happening?
24 Why didn't those people get wet in the rain?

[108] Adapted from Lind, Erber & Doyle, 1999

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Exercise 4.0 Sent-Ident[109]

Clinician

Instructions

Say each sentence to the recipient under predetermined conditions (for example, auditory-only).

Ask the recipient to repeat the sentence. If the repetition is correct, move to the next sentence. If the repetition is incorrect, say the sentence again under the same conditions. If subsequent presentations are required, change the manner of presentation for each one.

The original hierarchy of strategies is listed below. However, these can be altered to meet the stated needs of the recipient, and may include the presence or absence of background noise, increased or decreased distance between speaker and receiver, or changing degrees or amounts of visual access or information.

The sentences developed by Erber are set out below but you may use other lists to demonstrate the effects on speech reception of context cues, such as the SPiN sentences[110].

Scoring on this exercise involves tallying the number of sentences correctly identified under each condition.

Hierarchy of strategies

- Auditory (visual) cues alone – original presentation
- Auditory (visual) cues alone – repetition
- Auditory (visual) cues alone – repetition with emphasis
- Auditory (visual) cues with key word or words presented audiovisually
- Audiovisual cues for the whole sentence

Sentences developed by Erber (1996)

1 The man drove the bus around the corner.
2 The children sang a song with their teacher.
3 Her father put the milk on the table.
4 The nurse found her glasses behind the desk.
5 The boy threw his pencils into a box.
6 The girl made a red dress for her mother.
7 The farmer ate lunch under a big tree.
8 My friend hung the picture over his bed.
9 The old woman gave some bread to the ducks.
10 The cook washed all the apples in the sink.

[109] Adapted from Erber, 1996
[110] Kalikow, Stevens & Elliott, 1977

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Exercise 5.0 Sentence predictability[111]

Clinician

Instructions

1 Give the recipient their copy of the written sentences presented on page 205.
2 Say the entire sentence, including the missing word or phrase. Present the missing word or phrase under limited accessibility (for example, visual-only or in background noise). Missing word and phrase suggestions are given below, or you can make up your own to suit the recipient's needs.
3 Ask the recipient to repeat or write down the missing word or phrase.
4 Once the sentences are completed, discuss with the recipient the influence of within-sentence context cues (primarily lexical and semantic) on the perception of missing portions of the sentence.

High predictability sentences

1 He was so angry, he slammed the ……..
Missing word suggestion: door

2 My car has another flat ……..
Missing word suggestion: tyre

3 Please wipe your …….. on the mat.
Missing word suggestion: feet

4 Don't forget to water the ……..
Missing word suggestion: plants

5 The little girl clapped her ……..
Missing word suggestion: hands

6 Dig the …….. over here, by this bush.
Missing word suggestion: soil

7 He baked a …….. cake for her birthday.
Missing word suggestion: chocolate

8 Would you like another cup of ……..?
Missing word suggestion: coffee

Moderate predictability sentences

1 My dog refuses to eat ……..
Missing word suggestions: dog food; chicken

[111] Adapted from Erber, 1996

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2 We've just moved from South ……..
Missing word suggestions: Australia; America

3 She and her husband have …….. children.
Missing word suggestions: three; five

4 The …….. flew away when we got close.
Missing word suggestions: birds; geese

5 He gave the …….. bicycle to the boy.
Missing word suggestions: red; brand new

6 This radio has a broken ……..
Missing word suggestions: dial; speaker

7 We fed some bread to the ……..
Missing word suggestions: ducks; black swans

8 We saw …….. in the barn.
Missing word suggestions: chickens; hay bales

Low predictability sentences

1 We often talked about the ……..
Missing word suggestions: weather; news headlines; gravy

2 After dinner, she showed me the ……...
Missing word suggestions: bathroom; holiday snapshots; dishwasher

3 I just bought a ……..
Missing word suggestions: house; second-hand car; loaf of bread

4 He didn't know about the ……
Missing word suggestions: new book; missing van; sale

5 Please don't ask me about the ……...
Missing word suggestions: accident; latest current affairs; broken windows

6 I've never heard of a ……..
Missing word suggestions: talking hamster; two-headed ghost; blue-ringed octopus

7 Do you have a ……?
Missing word suggestions: new car; second bathroom; spare key

8 We couldn't remember the name of the ……
Missing word suggestions: hotel; art gallery; film

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Exercise 5.0 Sentence predictability[112]

Recipient

Instructions

1 The sentences below all have missing words or phrases.
2 The clinician will read out the entire sentence, including the missing word or phrase.
3 Repeat or write down the missing word or phrase.

High predictability sentences

1 He was so angry, he slammed the ……..
2 My car has another flat ……..
3 Please wipe your …….. on the mat.
4 Don't forget to water the ……..
5 The little girl clapped her ……..
6 Dig the …….. over here, by this bush.
7 He baked a …….. cake for her birthday.
8 Would you like another cup of ……..?

Moderate predictability sentences

1 My dog refuses to eat …….
2 We've just moved from South ……..
3 She and her husband have …….. children.
4 The …….. flew away when we got close.
5 He gave the …….. bicycle to the boy.
6 This radio has a broken ……..
7 We fed some bread to the ……..
8 We saw …….. in the barn.

Low predictability sentences

1 We often talked about the ……..
2 After dinner, she showed me the ……..
3 I just bought a ……..
4 He didn't know about the ……
5 Please don't ask me about the ……..
6 I've never heard of a ……..
7 Do you have a ……?
8 We couldn't remember the name of the ……

[112] Adapted from Erber, 1996

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Exercise 6.0 Asque[113]

Instructions

These sentences may be presented to the recipient in their groups but without identifying category names (see page 208). The recipient is asked to identify what the sentences in a particular group have in common. This is to introduce the task and need not be laboured as it is not the primary aim of the exercise. This is one way for the clinician to gain insight into the recipient's meta-communication skills.

Discuss with the recipient the nature (especially the complexity) of the response elicited when a certain type of question or utterance is said. For example, when listening conditions are difficult, the recipient may choose to ask Yes/No questions or forced-choice questions whereas when listening conditions are easier, the recipient may wish to ask product or process questions.

Yes/No questions

1 Do you know how to play chess?
2 Are you a vegetarian?
3 Have you been to a wedding recently?
4 Are you a good singer?
5 Do you like to eat green olives?

Limited- or forced-choice questions

1 Should I pack an apple or a banana in your lunch?
2 Did you fix the roof or does it still leak?
3 Will you answer the phone or should I get it?
4 Is your appointment today or tomorrow?
5 Would you prefer chicken or fish for dinner?

Specific or product questions

1 How many coins do you have in your pocket?
2 What time are we meeting at the office tomorrow?
3 Which television channel do you usually watch?
4 How old is the big tree in your backyard?
5 Where's the pencil sharpener?

[113] Adapted from Erber, 1996

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General or process questions

1 How can public transport be improved?
2 Why is this your favourite city?
3 How do you feel about camping in the mountains?
4 Why do so many people procrastinate?
5 How did they repair the air-conditioner?

General statements

1 My mother saves old Christmas cards.
2 This chair isn't very comfortable.
3 I always wear gloves when I work in the garden.
4 Some babies cry all the time.
5 My cat just had kittens.

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Exercise 6.0 Asque[114]

Recipient

Instructions
Discuss with the clinician what the sentences in each group have in common. Then discuss the sort of answer you may get when sentences in each group are asked.

Group 1

1 Do you know how to play chess?
2 Are you a vegetarian?
3 Have you been to a wedding recently?
4 Are you a good singer?
5 Do you like to eat green olives?

Group 2

1 Should I pack an apple or a banana in your lunch?
2 Did you fix the roof or does it still leak?
3 Will you answer the phone or should I get it?
4 Is your appointment today or tomorrow?
5 Would you prefer chicken or fish for dinner?

Group 3

1 How many coins do you have in your pocket?
2 What time are we meeting at the office tomorrow?
3 Which television channel do you usually watch?
4 How old is the big tree in your backyard?
5 Where's the pencil sharpener?

Group 4

1 How can public transport be improved?
2 Why is this your favourite city?
3 How do you feel about camping in the mountains?
4 Why do so many people procrastinate?
5 How did they repair the air-conditioner?

Group 5

1 My mother saves old Christmas cards.
2 This chair isn't very comfortable.
3 I always wear gloves when I work in the garden.
4 Some babies cry all the time.
5 My cat just had kittens.

[114] Adapted from Erber, 1996

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Exercise 7.0 Quest?ar[115]

Clinician

Instructions

1 Your communication partner will decide on a topic to discuss.
2 Give the recipient the 'half-script' below (30 questions). The recipient should ask each question. You or the communication partner should answer with as simple or complex an answer as is warranted.
3 Ask the recipient to repeat what they have understood of the response. Instigate repair if needed. Encourage the recipient to request clarification, and for the recipient and communication partner to work together to repair the breakdown.
4 Discuss the accuracy of the recipient's responses once the exercise is completed.

Topic examples

Museum, restaurant, post office, shopping, camping, doctor, zoo, beach, airport, swimming, mountains, picnic, music lesson, supermarket.

Questions (half-script)

1 Why did you go there?
2 When did you go?
3 How many people went with you?
4 Who were they? (give names)
5 What did you take with you?
6 Where is (the place that you went)?
7 How did you get there?
8 What did you see on the way?
9 What time did you get there?
10 What did you do first?
11 What did you see?
12 How many? What colour?
13 What happened at (the place where you went)?
14 What else did you do?
15 What were the other people doing at (the place where you went)?
16 What was the most interesting thing that you saw?
17 What was the most interesting thing that you did?
18 What did you buy?

[115] Adapted from Erber, 1996

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19 What kind? What flavour? What colour?
20 How much did it cost?
21 Did anything unusual happen? What?
22 How long did you stay?
23 What did you do just before you came home?
24 When did you leave?
25 How did you get home?
26 What happened on the way home?
27 What time did you get home?
28 How did you feel then?
29 When are you going back?
30 Do you think that I should go sometime? Why?

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Exercise 7.0 Quest?ar[116]

Recipient

Instructions

1 Your communication partner will decide on a topic to discuss.
2 Ask each of the questions provided below.
3 When the clinician or communication partner answers your question, repeat what you have understood of the response. Ask for clarification if you need to, and work with your clinician or communication partner to repair the breakdown.

Questions

1 Why did you go there?
2 When did you go?
3 How many people went with you?
4 Who were they? (give names)
5 What did you take with you?
6 Where is (the place that you went)?
7 How did you get there?
8 What did you see on the way?
9 What time did you get there?
10 What did you do first?
11 What did you see?
12 How many? What colour?
13 What happened at (the place where you went)?
14 What else did you do?
15 What were the other people doing at (the place where you went)?
16 What was the most interesting thing that you saw?
17 What was the most interesting thing that you did?
18 What did you buy?
19 What kind? What flavour? What colour?
20 How much did it cost?
21 Did anything unusual happen? What?
22 How long did you stay?
23 What did you do just before you came home?
24 When did you leave?
25 How did you get home?

[116] Adapted from Erber, 1996

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26 What happened on the way home?

27 What time did you get home?

28 How did you feel then?

29 When are you going back?

30 Do you think that I should go sometime? Why?

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Appendix 1 Case study

Features to note

In the following case study, note:

- The ways in which continuous discourse tracking (CDT) is used as a continuous performance measure to track improvement.
- The varied order of the exercises – the clinician moves between analytic, synthetic and communication therapy exercises to sustain the recipient's interest.
- Exercises are moved through quickly – as a rough guide, do not spend more than ten minutes on any one task.
- Environmental sound recordings are used as a resource (see page 6).
- Exercises are selected based on the perceptual needs and the everyday communication needs of the client.

Note also that a template following the format of the template in this case study can be photocopied from Appendix 2.

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Preliminary discussion

Client name: Jane Doe
Clinician's name: Mary X
Date: 21/3/96

Jane feels she is doing okay but is only picking up one or two words here and there with sound alone. She reports that she can't hear music.

Also:

- doing well with environmental sounds
- sound of voices still mechanical, unnatural
- wind noise very annoying.

Advised trial of lapel microphone in wind/noisy conditions. She feels that she wants re-MAPping.

Conclusion

Previous work shows that she is:

- Scoring well on minimal open-set synthetic work, but is possibly okay with high predictability word and sentence repetition.
- Greatly lacking in confidence, and needs plenty of listening exercises.
- Not keen to ask others for repetition more than once or twice in a conversation.
- Reporting particular difficulty following her younger sister's speech, particularly in noisy backgrounds.

Audiologist will leave re-MAPping for another month.

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Session 1

Client name: Jane Doe
Clinician's name: Mary X
Date: 21/3/96

.Auditory training record

All work auditory-only.

Analytic

1 – Vowel test (Commtram)[117] = 49/55.
2 – Consonant rhyme test (Commtram)[118] = 84/110.
Results attached – errors consistent, e.g. /n, m/ confused.
– mainly errors of place.

Synthetic

1 – Over learned speech[119] – found this very easy – no errors in 3 pages.
2 – Fill in the gap (Syntrex)[120] – easy – List 1 = 5/5 even words of low predictability.
3 – Spondee exercise (Syntrex)[121] – List 1 = 5/5
– List 2 = 5/5
4 – Pair work/complete the drawing – kitchen[122] – very rapid, easy responses. Instructions made deliberately difficult but she didn't miss a beat. Very confident now.
5 – CDT 'White Death' AV = 101.5 wpm
A = 18.5 wpm
To '...Sarah looked at her mother' p. 5
Lost confidence when she stumbled, because nervous and began to block. Discussed this, and agreed how she will find her score rapidly improving as she gets used to the procedure, and relaxes.

Communication Therapy

Sent-Ident[123] – 2/20 sentences on first presentation
– 5/20 on first repetition (cumulative 7/20)
– 7/20 on second repetition – with emphasis (cumulative 14/20)
– remaining sentences not accurately repeated after five presentations.
Results indicate request for second repetition has substantial impact on accuracy of perception.

CDT discussed and demonstrated as tool for practicing repair strategies to overcome miscommunication.

Next time

1 – NAL lipreading test
2 – Questions and instructions (Syntrex)[124]

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[117] Plant, 1984.
[118] Plant, 1984.
[119] Jeffers and Barley, 1971.
[120] Plant, 1991.
[121] Plant, 1991.
[122] Watcyn-Jones, 1997.
[123] Erber, 1996.
[124] Plant, 1991.

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3 – Environmental sounds
4 – Advanced interactive stories[125]
5 – Consonant training – make contrast lists for 'place'[126]
6 – CDT as speed of information transmission
7 – CDT as practice of repair strategies
8 – Introduce telephone tones. After that, phone training.

Jane to ask younger sister to attend next session – to be introduced to CDT and repair strategy practice.

[125] 'Synthetic Training' chapter, exercise 11.2
[126] Plant, 1984.

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Session 2

Client name: Jane Doe
Clinician's name: Mary X
Date: 24/3/96

Auditory training record

All work auditory-only.

Discussion
Attempted to use telecoil at movies but couldn't locate loop. Otherwise, hasn't tried anything new because of lack of confidence.

Analytic
Consonant training/Commtram[127]
Manner: List 6–10 Very easy – 100%
List 14

Synthetic
1 – NAL L/R test (Commtram, p.169)[128] – 49/50
2 – Questions and instructions (Syntrex)[129] List 7 – excellent work
3 – Environmental sounds – used this as a training tool – very useful. Jane found this very helpful so will continue last two lists next time.
4 – CDT – 'White Death' Av = 85.5 wpm
A = 40.5 wpm
To "…yes mother," Sarah said. "Thank you…"
p. 162
5 – Advanced interactive stories[130] – too difficult, Jane too tired by this stage to concentrate.

Communication Therapy
Pair work – W/end course[131] – excellent work.
Jane and clinician demonstrated CDT to sister, and Jane and sister commenced tracking together.
Repairs showed Jane more likely to use general repair initiators, for example, 'Could you say that again?', 'Sorry, I missed all of that'.
Sister most commonly responded to requests with repetition of entire text without change.
Strategies discussed in terms of efficiency.
Jane and sister encouraged to continue practicing at home for brief periods.

Next time

1 – Commtram dialogue, p. 199[132]
2 – Interactive stories[133]
3 – Environmental sounds
4 – Phone work – Pair work shopping list[134]

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[127] Plant, 1984.
[128] Plant, 1984.
[129] Plant, 1991.
[130] Synthetic Training chapter, exercise 11.2
[131] Watcyn-Jones, 1984.
[132] Plant, 1984.
[133] 'Synthetic Training' chapter, exercise 11.1
[134] Watcyn-Jones, 1984.

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5 – CDT – phone - information transfer
6 – Xylophone
7 – CDT to focus on specific requests and varying content and presentation of repairs
8 - Quest?ar[135] – confirming content of another's turn

[135] Erber, 1996

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Session 3

Client name: Jane Doe
Clinician's name: Mary X
Date: 7/4/96

Auditory training record

Discussion
Jane commented, in relation to her increased dynamic range for high frequencies, that whereas she initially found them intolerable, and her perception of high frequency stimulation was nearly 'a sensation bordering on pain', today/now she is perceiving high frequencies as actual tones. Very interesting. She also reported that during the Easter break she noticed quite markedly how much better (100%) she is hearing than her aided sister.

Analytic

Synthetic
1 – Commtram dialogue: Restaurant, p. 199[136] – excellent, easy for her.
2 – Watcyn-Jones, #88 'What does it mean?'[137] – only one error, 15/16 – excellent, difficult task.
3 – CDT 'White Death': Av = 84 wpm
A = 49 wpm
To '...and they need money', p. 10

Communication Therapy
1 – Phone work: Started with simple over-learned speech.
2 – Pair work: 'Shopping list'[138] – established strategies for information eliciting.
3 – Pair work: 'Wayout w/end course'[139] – practiced strategies. Jane really got into the flow of it and relaxed minute by minute. Still nervous however so needs lots of phone work.
4 – CDT continued with Jane and sister – work on increasing variability of both requests for repair and repair behaviours. Introduced:

- Specific repair requests – partial repetition of previous turn, 'Wh' and Yes/No questions.
- Rephrasing - use of synonyms, and provision of additional context.

5 – Quest?ar[140] – topic – sister's recent holiday in the country. Jane could repeat back basic content of sister's turn in 18/23 questions. Used mixture of general and specific requests for clarification for remaining responses.

Next time

1 – Watcyn-Jones, #48 'Find the differences 2'[141]
2 – CRT – look at high frequency consonants
3 – Continue phone work
4 – Assertiveness training

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[136] Plant, 1984.
[137] Watcyn-Jones, 1995.
[138] Watcyn-Jones, 1984.
[139] Watcyn-Jones, 1984.
[140] Erber, 1996.
[141] Watcyn-Jones, 1995.

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Session 4

Client name: Jane Doe
Clinician's name: Mary X
Date: 19/4/96

Auditory training record

Discussion
Finding new MAP difficult to get used to – certain sounds seem very noisy to her, for example, paper rustling, water running, However, she says that she is certain that she will be able to 'adjust to it'.

Analytic
Did Consonant Rhyme Test again[142] – this time, 14/26, previous errors were correct, most notably /s/ and /v/

Synthetic
1 – Watcyn-Jones & Howard-Williams: Grammar #48 'Find the Differences 2' [143]
Excellent work, found it easy and performed unhesitatingly.
2 – CDT 'White Death' AV = 94 wpm
A = 41 wpm

Communication Therapy
1 – Phone: Commenced phone work.
2 – Commtram dialogue 'new car'[144] – excellent
3 – Watcyn-Jones: #31 'Answering an advertisement'[145] – again, excellent work
4 – Discussed various techniques for informing others of Jane's hearing impairment
5 – Further CDT practice – on specific repair initiation and repair behaviours. Jane is now incorporating a variety of repair initiation strategies. Repairs are resolved most commonly in one repair initiation/repair sequence (74%) and in two sequences (18%).

Jane relaxed today and handled the phone work very naturally and appropriately, although she said she was so nervous that she was perspiring. She worked very hard, and now just needs lots of practice to get her confidence up.

Next time

1 – Crossword (phone)
2 – CDT – *The BFG* by Roald Dahl (phone)
3 – Environmental sounds tape, sides 3 & 4
4 – Review of assertiveness training and repair strategies

[142] Plant, 1984.
[143] Watcyn-Jones and Howard-Williams, 2001
[144] Plant, 1984.
[145] Watcyn-Jones 1995

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Session 5

Client name: Jane Doe
Clinician's name: Mary X
Date: 26/4/96

Auditory training record

Discussion
After last session, Jane used phone at home – said she kept control of both conversations and they went fine. However, wants to practice more to get her confidence up. Reports that she can now understand young children's speech for the first time. Is also noticing that she is understanding more speech without relying on lip reading. Obviously gaining more confidence and awareness of her abilities.

Analytic

Synthetic
CDT 'White Death' Av = 89.5 wpm
A = 54 wpm
To '...was she afraid?' p. 17

Communication Therapy
Phone – Crossword/ Watcyn-Jones, #46[146] – very easy. Jane seemed much more relaxed and confident, and found the task easy.
Jane reported success in using new strategies in conversation with various shop assistants on recent shopping trip.
CDT practice with sister continues – Jane reports practice still contains many repairs but she feels they are more readily resolved.

Next time

1 – CDT
2 – Track *The BFG* on the phone
3 – Watcyn-Jones dialogue, #45, #49, #87[147]

[146] Watcyn-Jones 1995
[147] Watcyn-Jones 1995

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Session 6

Client name: Jane Doe
Clinician's name: Mary X
Date: 30/4/96

Auditory training record

Discussion:
Jane is going to Workbridge this week to enquire about work possibilities – is clearly feeling very confident and although she is not using phone voluntarily yet, is feeling able to.

Analytic

Synthetic
CDT – 'White Death' Av = 89 wpm
A = 76.5 wpm
To '…please think about your answer …,' p. 21

Communication Therapy
1 – Phone
2 – Watcyn-Jones, #45, 'Carrots'[148] – excellent rapid work.
3 – Phone tracking – *The BFG* by Roald Dahl – zoomed through two pages unfalteringly after the first sentence. Picks things up very quickly!
4 – Quest?ar[149] attempted over telephone with clinician to practice auditory-only repair and confirmation strategies. Accuracy achieved in CDT maintained in this exercise with minimal intrusion of repairs or incorrect information in confirmation turns.

Next time

1 – Continue phone work – *The BFG* tracking
2 – Start adding background noise
3 – Speech discrimination. Assessment – 6 months.

[148] Watcyn-Jones 1995
[149] Erber, 1996

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Appendix 2 Photocopiable tables and graphics

Analytic Training
Table 1. Vowel recognition

Response

Stimulus	Heed	Hid	Head	Had	Hard	Hud	Hod	Hawed	Hood	Who'd	Heard
Heed											
Hid											
Head											
Had											
Hard											
Hud											
Hod											
Hawed											
Hood											
Who'd											
Heard											

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Analytic Training
Table 2. Consonant recognition

Response

Stimulus	b	p	m	v	f	d	t	n	z	s	g	k
b												
p												
m												
v												
f												
d												
t												
n												
z												
s												
g												
k												

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Synthetic Training
Clarification Strategies

1 Please say that again.

2 Please repeat the first / last word / the last few words.

3 Did you say ……..?

4 Please use a different word.

5 Could you say that another way?

6 What was the word that came after ……..?

7 Please would you spell that word?

8 Are you talking about ……..?

9 Please talk more slowly.

10 Please use shorter sentences.

11 Please use a louder voice.

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Synthetic Training
Exercise 3 (recipient's copy) Closed-set – visual identification task[150]

[150] NSW Department of School Studies, 1990. Courtesy of NSW Department of Education and Training.

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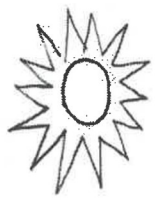
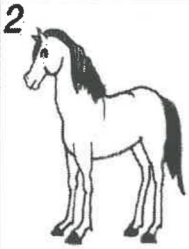
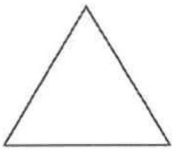
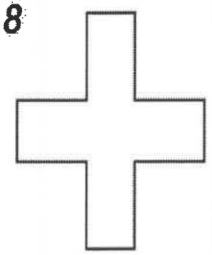
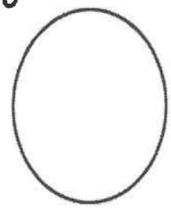
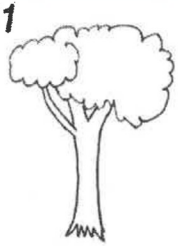
Synthetic Training
Exercise 6.1 (clinician's copy) Information transfer – complete the grid[151]

1 	2 	3	4 	5
	7 Date:	8 	9	10 
11 	12 Year:	13 Yesterday:	14	15
16 Name:	17 10	18	19 Eye colour:	20 Name:

[151] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.

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Synthetic Training
Exercise 6.1 (recipient's copy) Information transfer – complete the grid[152]

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20

[152] Watcyn-Jones, 1984. Reproduced by permission of Penguin Books Ltd.

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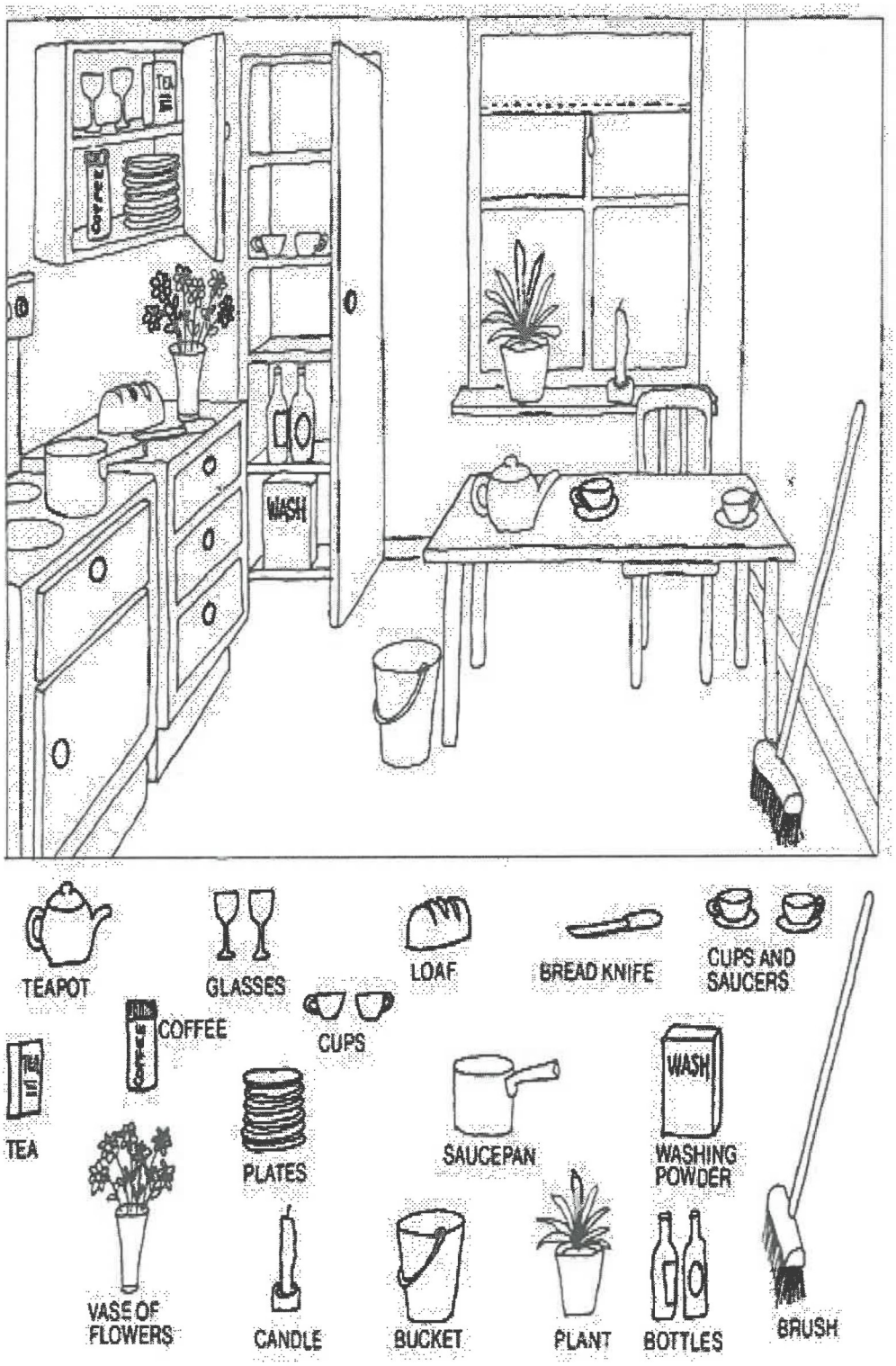
Synthetic Training
Exercise 6.2 (clinician's copy) Information transfer – complete the drawing[153]



[153] Watcyn-Jones, 1997. Reproduced by permission of Penguin Books Ltd.

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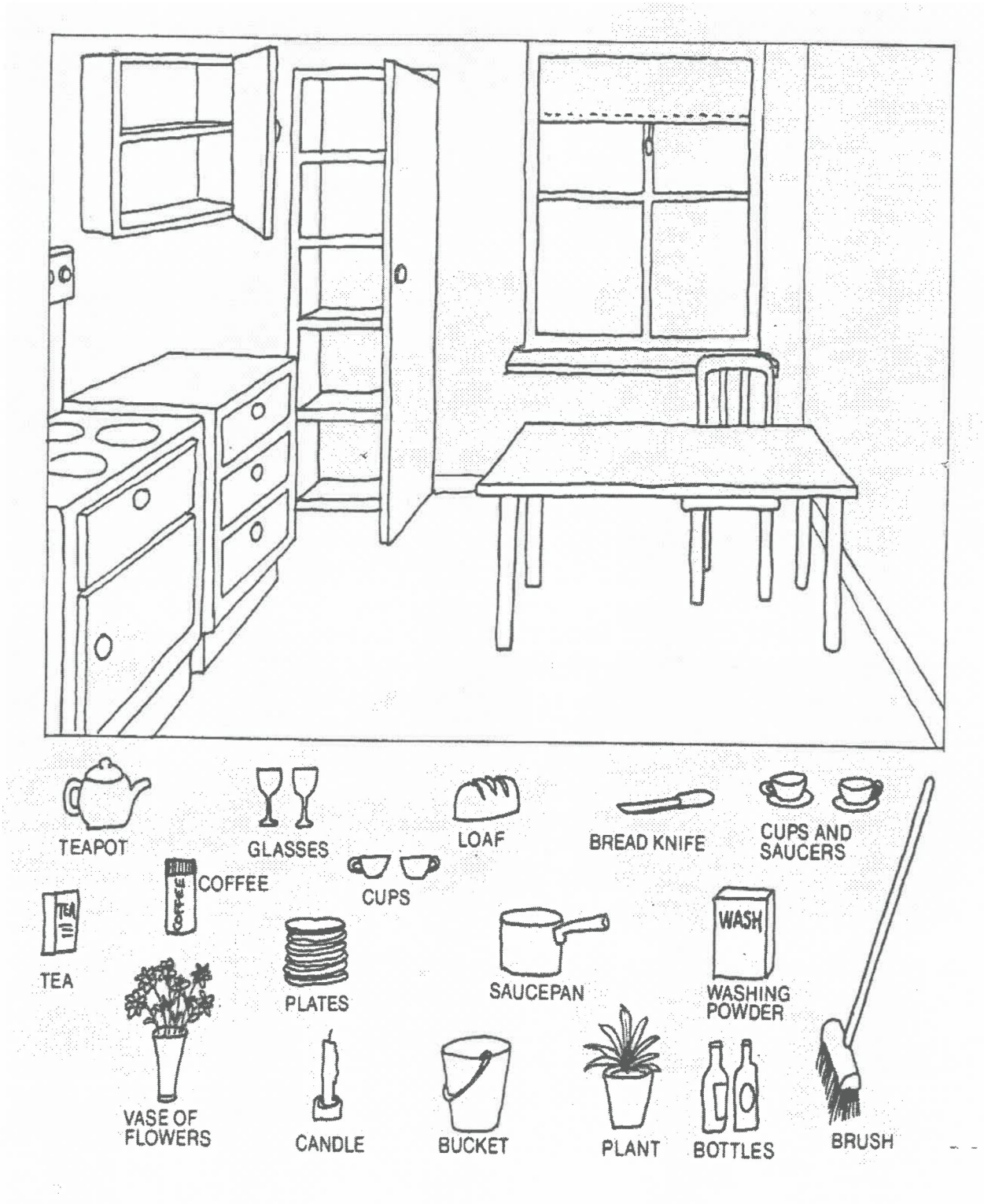
Synthetic Training
Exercise 6.2 (recipient's copy) Information transfer – complete the drawing[154]



[154] Watcyn-Jones, 1997. Reproduced by permission of Penguin Books Ltd.

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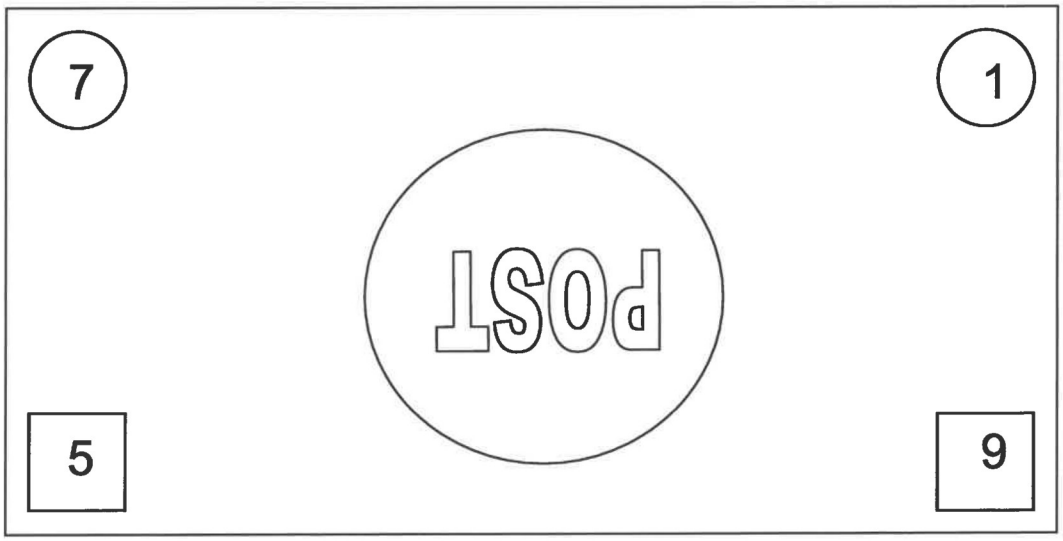
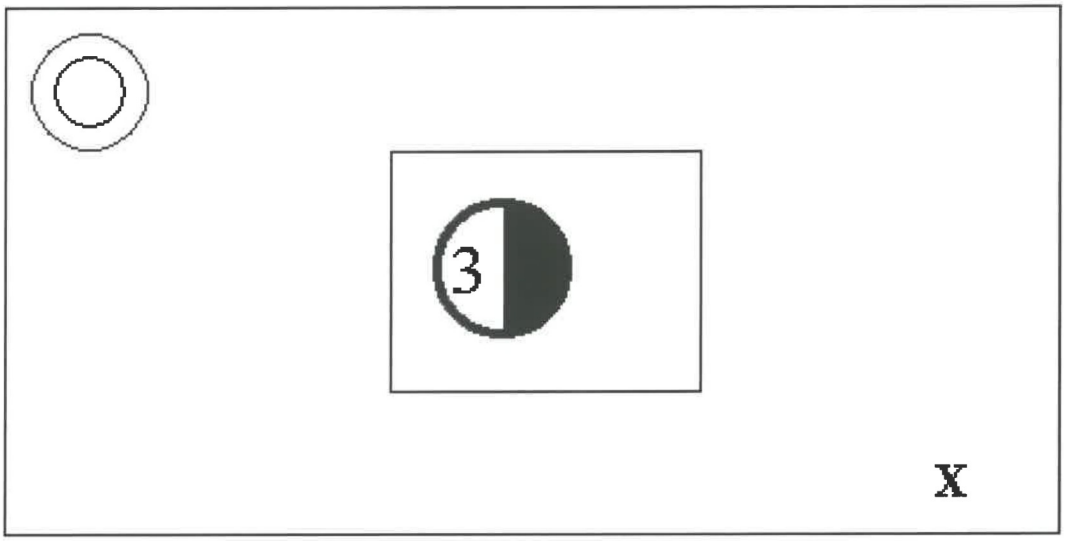
Synthetic Training
Exercise 6.3 (clinician's copy) Information transfer – describe, perceive and draw[155]





[155] Plant, 1991. Reproduced courtesy of National Acoustic Laboratories

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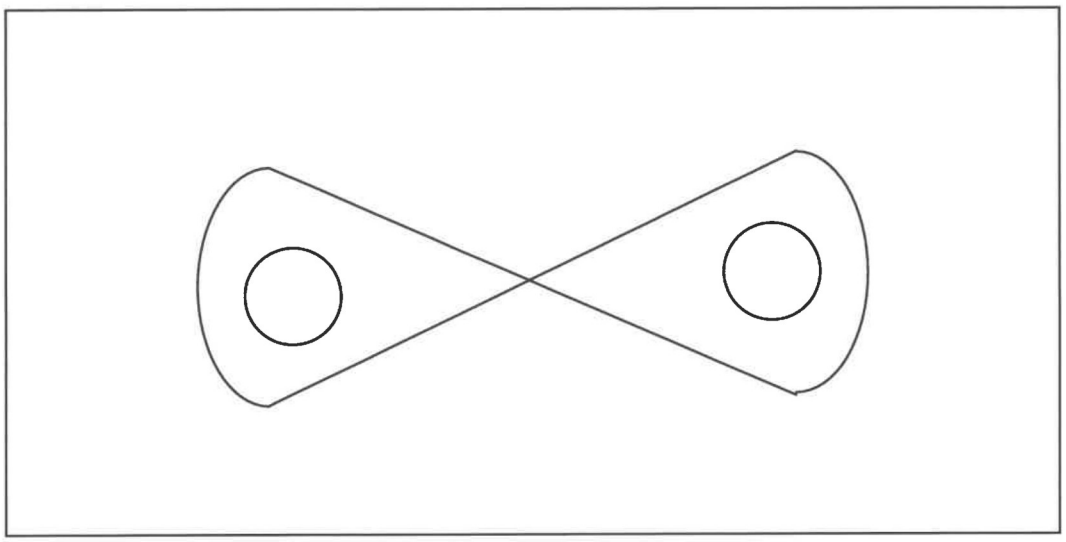
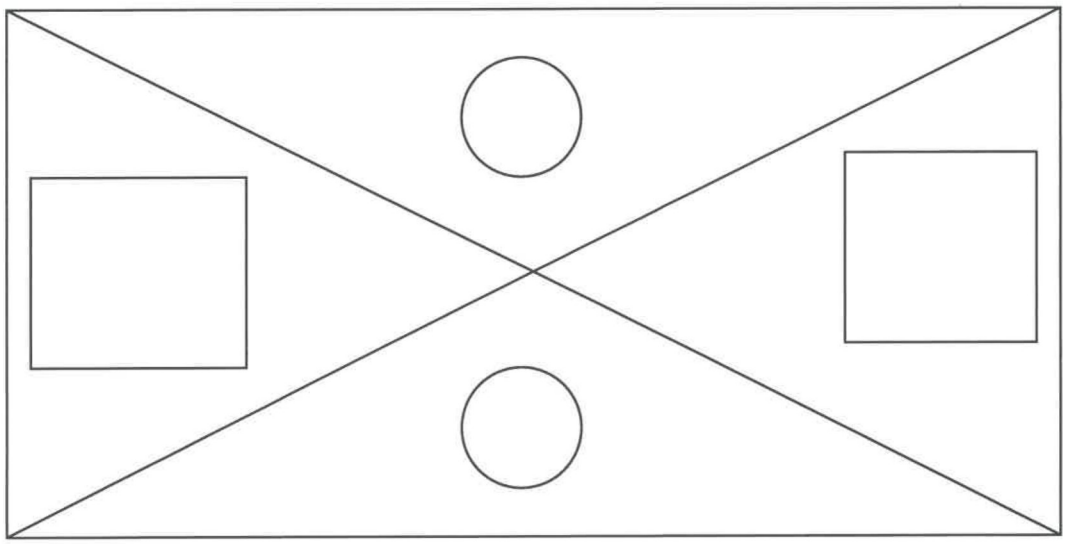
Synthetic Training
Exercise 6.3 (clinician's copy) Information transfer – describe, perceive and draw (continued)[156]





[156] Plant, 1991. Reproduced courtesy of National Acoustic Laboratories

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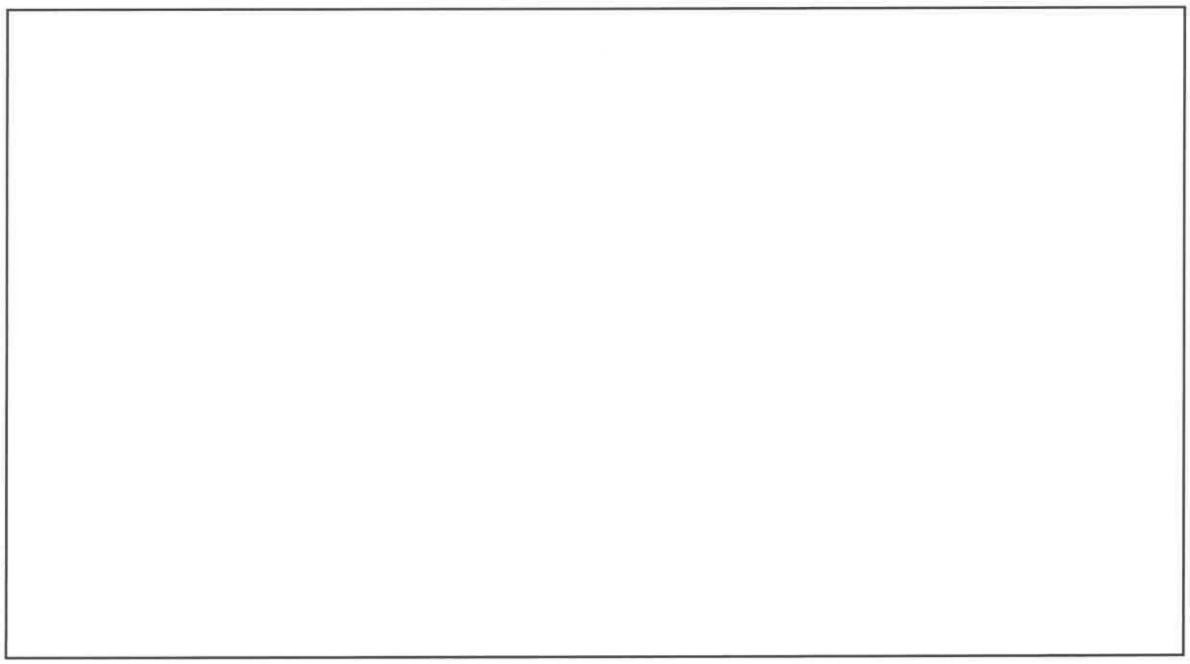
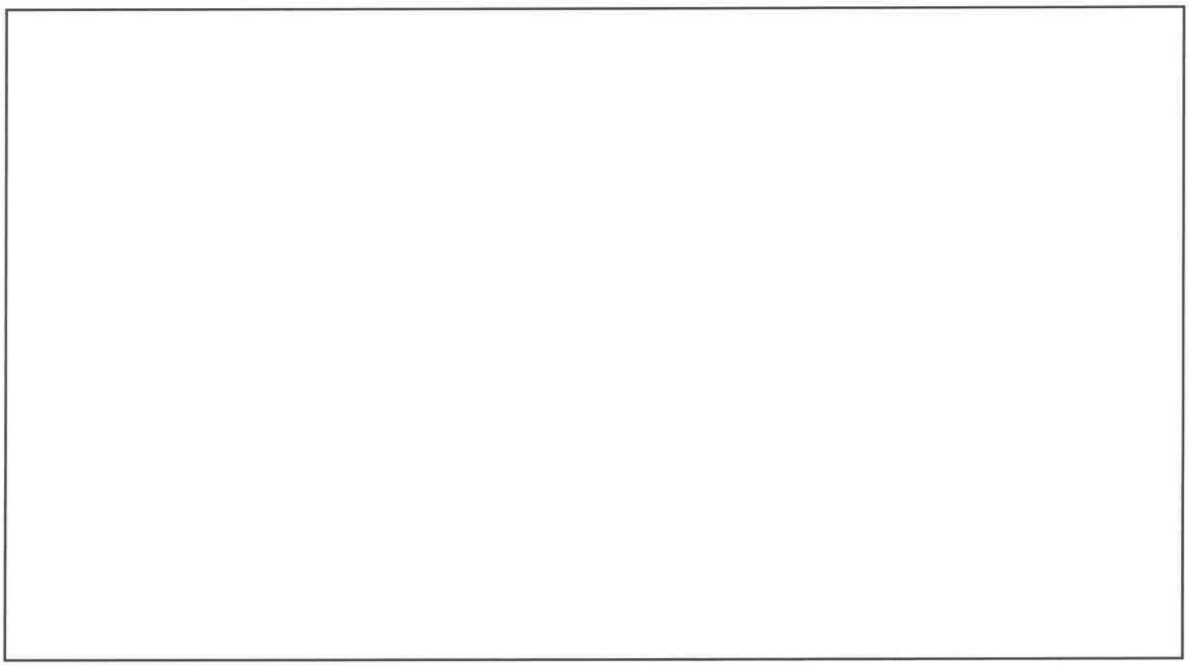
Synthetic Training
Exercise 6.3 (recipient's copy) Information transfer – describe, perceive and draw[157]





[157] Plant, 1991. Reproduced courtesy of National Acoustic Laboratories

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Synthetic Training
Exercise 6.4 (clinician's copy) Information transfer – complete the missing information[158]

Detail	Flat	House
Street	King Street	
Size	big quite big small	big quite big ✓ small
Condition	modern ✓ quite modern not very modern	modern quite modern not very modern
Number of rooms	three	downstairs – upstairs –
List of rooms	a living room a kitchen a bedroom	
Central heating	Yes	
Near the shops		No
Distance from town centre	1 km	
Rent		$1600 a month
Any other information	You share the toilet and bathroom on the first floor.	

[158] Watcyn-Jones and Howard-Williams, 2001. Reproduced by permission of Penguin Books Ltd.

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Synthetic Training
Exercise 6.4 (clinician's copy) Information transfer – complete the missing information[159]

Detail	Flat	House
Street		Park Road
Size	big ✓ quite big small	big quite big small
Condition	modern quite modern not very modern	modern quite modern not very modern ✓
Number of rooms	three	downstairs – two upstairs – three
List of rooms		a living room a kitchen two bedrooms a bathroom/toilet
Central heating		No
Near the shops	Yes	
Distance from town centre		2 kms
Rent	$250 a week	
Any other information		There is a large garden and a garage.

[159] Watcyn-Jones and Howard-Williams, 2001. Reproduced by permission of Penguin Books Ltd.

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Communication Therapy
Table 5. Profile for analysis of conversation repair in tracking[160]

	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	11th	12th
Listener-initiated requests for repair												
1 General request, for example, 'What?' 'Huh?' 'Sorry?'												
2 Specific request												
a. Elliptical request: 'In the…?' 'She went…?'												
b. Full request: 'What did he do?'												
Speaker-initiated repairs												
1 Repetition												
a. Shortened portion of text												
b. Without emphasis												
c. With emphasis												
2 Rephrasing												
a. Simplify												
3 Reframing												
a. Complex structure												
b. Semantic cue												
4 Spell key word or words												

[160] The author wishes to acknowledge Mrs Lynelle Williams who designed the original version of this form. This modified version of her original design appears with her express consent.

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Case study template (from appendix 1)

Client name:
Clinician's name:
Date:

Auditory training record

Discussion

Analytic

Synthetic

Communication Therapy

Next time

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